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Scoping of Flood Hazard Mapping Needs for Hancock County, Maine

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CONVERSION FACTORS AND ABBREVIATIONS

Multiply	By	To obtain
Length		
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
square foot (ft ²)	0.09290	square meter (m ²)
square mile (mi ²)	2.590	square kilometer (km ²)
Volume		
cubic foot (ft ³)	0.02832	cubic meter (m ³)
Slope		
foot per mile (ft/mi)	0.1894	meter per kilometer (m/km)
Velocity and Flow		
foot per second (ft/s)	0.3048	meter per second (m/s)
cubic foot per second (ft ³ /s)	0.02832	cubic meter per second (m ³ /s)

OTHER ABBREVIATIONS USED IN REPORT

BAD	Best Available Data
BFE	Base Flood Elevation
CAC	Community Assistance Contact
CAV	Community Assistance Visit
DFIRM	Digital Flood Insurance Rate Map
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
GIS	Geographic Information System
LOMC	Letter of Map Change
MEGIS	Maine Office of Geographic Information Systems
MFMP	Maine Floodplain Management Program
MNUSS	Mapping Needs Update Support System
NFIP	National Flood Insurance Program
USGS	United States Geological Survey

Scoping of Flood Hazard Mapping Needs for Hancock County, Maine

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Section 1. Introduction

This report was prepared by the U.S. Geological Survey (USGS) Maine Water Science Center as the deliverable for scoping of flood hazard mapping needs for Flood Insurance Study revision in Hancock County, Maine, under Federal Emergency Management Agency (FEMA) Inter-Agency Agreement Number HSFE01-06-X-0020. This section of the report explains the objective of the task and the purpose of the report.

Background

The Federal Emergency Management Agency (FEMA) developed a plan in 1997 to modernize the FEMA flood mapping program. FEMA flood maps delineate flood hazard areas in support of the National Flood Insurance Program (NFIP). FEMA's plan outlined the steps necessary to update FEMA's flood maps for the nation to a seamless digital format and streamline FEMA's operations in raising public awareness of the importance of the maps and responding to requests to revise them. The modernization of flood maps involves conversion of existing information to digital format and integration of improved flood hazard data as needed. To determine flood mapping modernization needs, FEMA has established specific scoping activities to be done on a county-by-county basis for identifying and prioritizing requisite flood-mapping activities for map modernization. The U.S. Geological Survey (USGS), in cooperation with FEMA and the Maine Floodplain Management Program (MFMP) State Planning Office, began scoping work in 2006 for Hancock County. Scoping activities included assembling existing data and map needs information for communities in Hancock County, documentation of data, contacts, community meetings, and prioritized mapping needs in a final scoping report (this document), and updating the Mapping Needs Update Support System (MNUSS) database with information gathered during the scoping process.

The average age of the FEMA floodplain maps (all types) in Hancock County, Maine, is at least 19 years. Most of these studies were published in the late 1980s and early 1990s, and no study is more recent than 1992. Some towns have partial maps that are more recent than their study, indicating that the true average age of the data is probably more than 19 years. Since the studies were done, development has occurred in some of the watersheds and the characteristics of the watersheds have changed. Therefore, many of the older studies may not depict current conditions or accurately estimate risk in terms of flood heights or flood mapping.

Scope of Work

The following is the scope of work as defined in the FEMA/USGS Statement of Work:

Task 1: Collect data from a variety of sources including community surveys, other Federal and State Agencies, NFIP State Coordinators, Community Assistance Visits (CAVs) and FEMA archives. Lists of mapping needs will be obtained from the MNUSS database, community surveys, and CAVs, if available. FEMA archives will be inventoried for effective flood insurance rate map (FIRM) panels, flood insurance study (FIS) reports, and other flood-hazard data or existing study data. Best available base map information, topographic data, flood-hazard data, and hydrologic and hydraulic data will be identified. Data from the MFMP database also will be utilized.

Task 2: Contact communities in Hancock County to notify them that FEMA and the State have selected them for a map update, and that a project scope will be developed with their input. Topics to be reviewed with the communities include (1) purpose of the flood-map project (for example, the changes that have prompted the map update); (2) the community's mapping needs; (3) the community's available mapping, hydrologic, hydraulic, and flooding information; (4) target schedule for completing the project; and (5) the community's engineering, planning, and geographic information system (GIS) capabilities.

On the basis of the collected information from Task 1 and community contacts/meetings in Task 2, the USGS will develop a draft project scope for the identified mapping needs of the communities in Hancock County. The draft project scope will summarize available information, evaluate effective FIS data for use in the project, and identify other data and the source of data needed to complete the project. The draft project scope will establish prioritized mapping needs according to census and waterbody criteria and estimate schedules and associated costs for completion of the components of flood mapping.

The following subject areas are documented in this report as set forth in the statement of work: available flood-mapping-related data and documented mapping needs, community meetings and contacts, scope and prioritization of mapping needs, and project methods. Scoping-level time and costs for identified mapping needs will be provided as a document separate from this report. The appendix section of this report provides a community by community summary of information obtained and used in the scoping process for all 29 communities and townships in Hancock County that have FIRMs and(or) FISs (table 1). Six communities have flood hazard boundary maps (FHBM) rather than FIRMs or FISs. Six communities, including Amherst, Aurora, Dedham, Eastbrook, Franklin, and Waltham, are not in the program. The Township of Fletchers Landing was formerly known as T08 SD; the name was changed by law on June 29, 2005 (<http://janus.state.me.us/legis/ros/lom/LOM122nd/PandSL1-3/PandSL1-3-02.htm>, accessed on September 8, 2006).

Hancock County contains many islands that are part of towns but have their own community identifier (CID). These islands and the towns to which they belong are listed in table 2; most of the islands are part of the town of Deer Isle. The rest of this report will regard these islands as part of the towns to which they belong unless specific flood-related information is on file for them.

Table 1. Organized communities and unorganized townships in Hancock County, Maine.

[CID, community identification number; FIRM, flood insurance rate map; NIP, not in program; NSFHA, no specific flood hazard analysis; FHBM, flood hazard boundary map; *, community has a published flood insurance study; --, no data]

Community	CID	Land area, in square miles	Population (year 2000)	Population density, 2000, in people per square mile	Map type	Map date
Amherst, Town of	230272	39.6	230	5.8	FHBM	1/24/1975, NIP
Aurora, Town of	230273	39.2	121	3.1	--	NIP
Bar Harbor, Town of	230064	43.3	4,820	111.3	FIRM	5/2/1991*
Blue Hill, Town of	230274	64.1	2,390	37.3	FIRM	5/3/1990*
Brooklin, Town of	230275	17.9	841	47.0	FIRM	3/1/1987
Brooksville, Town of	230276	32.6	911	27.9	FIRM	5/15/1991*
Bucksport, Town of	230065	53.9	4,908	91.1	FIRM	11/4/1988*
Castine, Town of	230277	7.8	1,343	172.2	FIRM	5/2/1991*
Cranberry Isles, Town of	230278	3.1	128	41.3	FIRM	7/15/1992*
Dedham, Town of	230279	44.3	1,422	32.1	FHBM	4/18/1975, NIP
Deer Isle, Town of	230280	29.5	1,876	63.6	FIRM	5/2/1991*
Eastbrook, Town of	230281	37.6	370	9.8	FIRM	3/1/1987, suspended
Ellsworth, City of	230066	92.9	6,456	69.5	FIRM	11/4/1988*
Fletchers Landing, Township of	230458	16.1	--	--	FHBM	10/1/1986
Franklin, Town of	230282	37.6	1,370	36.4	FIRM	7/16/1991*, suspended
Frenchboro, Town of	230594	4.8	38	7.9	FIRM	4/17/1987
Gouldsboro, Town of	230283	47.6	1,941	40.8	FIRM	6/4/1987*
Great Pond, Town of	230596	39.9	47	1.2	NSFHA	--
Hancock, Town of	230284	30.1	2,147	71.3	FIRM	6/3/1991*
Lamoine, Town of	230285	18	1,495	83.1	FIRM	5/2/1991*
Mariaville, Town of	230286	46.8	414	8.8	FHBM	3/14/1975
Mount Desert, Town of	230287	39	2,109	54.1	FIRM	8/2/1990*
Oqiton (T4 ND), Township of	230703	51.3	--	--	NSFHA	--
Orland, Town of	230288	51.3	2,134	41.6	FIRM	2/4/1987
Osborn, Town of	230595	38	69	1.8	NSFHA	--
Otis, Town of	230289	28.6	543	19.0	FHBM	7/26/1977
Penobscot, Town of	230290	41.2	1,344	32.6	FIRM	7/16/1991*
Sedgwick, Town of	230291	27.3	1,102	40.4	FIRM	2/4/1987
Sorrento, Town of	230292	4	290	72.5	FIRM	9/4/1985
Southwest Harbor, Town of	230293	13.8	1,966	142.5	FIRM	6/3/1991*
Stonington, Town of	230294	9.7	1,152	118.8	FIRM	6/3/1991*
Sullivan, Town of	230295	28.1	1,185	42.2	FIRM	9/4/1985
Surry, Town of	230296	38.9	1,361	35.0	FIRM	5/2/1991*
Swans Island, Town of	230297	13.9	327	23.5	FIRM	3/1/1987
Tremont, Town of	230298	17.2	1,529	88.9	FIRM	8/2/1990*
Trenton, Town of	230299	18.2	1,370	75.3	FIRM	8/2/1990*
Verona, Town of	230300	6.2	533	86.0	FHBM	11/26/1976
Waltham, Town of	230301	32.9	306	9.3	FIRM	7/2/1987, suspended
Winter Harbor, Town of	230302	14.4	988	68.6	FIRM	5/15/1991*
T03 ND, Township of	230597	52.1	--	--	NSFHA	--
T07 SD, Township of	230598	22.9	--	--	NSFHA	--
T09 SD, Township of	230704	9.4	--	--	NSFHA	--

T10 SD, Township of	230599	39.3	--	--	NSFHA	--
T16 MD, Township of	230705	38.1	--	--	NSFHA	--
T22 MD, Township of	230600	38.4	--	--	NSFHA	--
T28 MD, Township of	230601	36.9	--	--	NSFHA	--
T32 MD, Township of	230706	40.9	--	--	NSFHA	--
T34 MD, Township of	230707	36.5	--	--	NSFHA	--
T35 MD, Township of	230708	38.6	--	--	NSFHA	--
T39 MD, Township of	230709	39.3	--	--	NSFHA	--
T40 MD, Township of	230710	39	--	--	NSFHA	--
T41 MD, Township of	230711	38.5	--	--	NSFHA	--
Total		1,690	51,576	30.5 (average)		

Table 2. Islands in Hancock County, Maine, that have community identification numbers (CID).
[NSFHA, no specific flood hazard area]

Island	CID	Land area, in square miles	Map type	Town to which island belongs
Bald Island	231011	0.017	NSFHA	Deer Isle
Bar Island	231000	0.004	NSFHA	Deer Isle
Barred Island	231016	0.01	NSFHA	Deer Isle
Beach Island	231025	0.115	NSFHA	Deer Isle
Bear Island	231019	0.076	NSFHA	Deer Isle
Birch Island	230997	0.014	NSFHA	Deer Isle
Bradbury Island	231005	0.251	NSFHA	Deer Isle
Butter Island	231015	0.482	NSFHA	Deer Isle
Channel Rock Island	231029	0.0001	NSFHA	Brooklin
Colthead Island	231027	0.007	NSFHA	Deer Isle
Compass Island	231022	0.011	NSFHA	Deer Isle
Crow Island	231006	0.008	NSFHA	Deer Isle
Eagle Island	231008	0.489	NSFHA	Deer Isle
Eaton Island	231001	0.024	NSFHA	Deer Isle
Fling Island	231012	0.026	NSFHA	Deer Isle
Grass Ledge Island	231017	0.002	NSFHA	Deer Isle
Great Spruce Head Island	231018	0.405	NSFHA	Deer Isle
Hardhead Island	231007	0.008	NSFHA	Deer Isle
Hog Island	230994	0.089	NSFHA	Deer Isle
Horse Head Island	231024	0.016	NSFHA	Deer Isle
Inner Porcupine Island	231009	0.016	NSFHA	Deer Isle
Little Marshall Island	231031	0.022	NSFHA	Swans Island
Little Spruce Head	231023	0.069	NSFHA	Deer Isle
Marshall Island	231030	1.533	NSFHA	Swans Island
Outer Porcupine Island	231010	0.01	NSFHA	Deer Isle
Pickering Island	231002	0.385	NSFHA	Deer Isle
Pond Island	230993	0.07	NSFHA	Deer Isle
Pumpkin Island	230996	0.003	NSFHA	Deer Isle
Resolution Island	231028	0.04	NSFHA	Deer Isle
Scott Island	230998	0.017	NSFHA	Deer Isle
Scrag Island	231020	0.005	NSFHA	Deer Isle
Sheep Island	230999	0.007	NSFHA	Deer Isle
Sloop Island	231013	0.002	NSFHA	Deer Isle
Sloop Island Ledge	231014	0.001	NSFHA	Deer Isle
Spectacle Island	230995	0.02	NSFHA	Brooksville
Two Bush Island	231003	0.001	NSFHA	Deer Isle
Western Island	230992	0.034	NSFHA	Deer Isle

Description of Hancock County

Hancock County in midcoast Maine (fig. 1) encompasses an area of 1,690 square miles (mi²) and comprises one city (Ellsworth), 36 towns, and 15 townships (table 1, fig. 1). The population of Hancock County reported by the 2000 census was approximately 51,580 people. The population for the 2000 census represents a 10-percent increase over the population reported in the 1990 census (46,948 people) and a 23-percent increase over the population reported in the 1980 census (41,781 people) (University of Maine, 2004).

Hancock County contains or borders 1,338 mapped ponds and lakes ranging in surface area from less than 0.1 acre to 9,380 acres (14.7 mi²) for a total surface area of 66,800 acres (104 mi²), from GIS analysis. Mean pond size is 50 acres; Graham Lake, in the communities of Mariaville, Waltham, Ellsworth, and Fletchers Landing, is the largest waterbody. Bar Harbor, Bucksport, Ellsworth, Mount Desert, Sorrento, Southwest Harbor, and Stonington use lakes or ponds as sources of public water (Maine Department of Health and Human Services, 2006), though the total quantities of surface water used by these municipalities was not determined. Castine withdraws ground water for its supply, but may use ponds as above-ground reservoirs for periods of high demand.

Hancock County includes approximately 2,110 miles of rivers and streams and about 1,130 miles of coastline, including islands in the Atlantic Ocean (fig. 2). The primary rivers in Hancock County include Penobscot River (which forms the western boundary of the county), Union River, and the upper reaches of the Narraguagus River and its West Branch. Union River drains an area of about 570 mi² where it empties into Union River Bay (Atlantic Ocean).

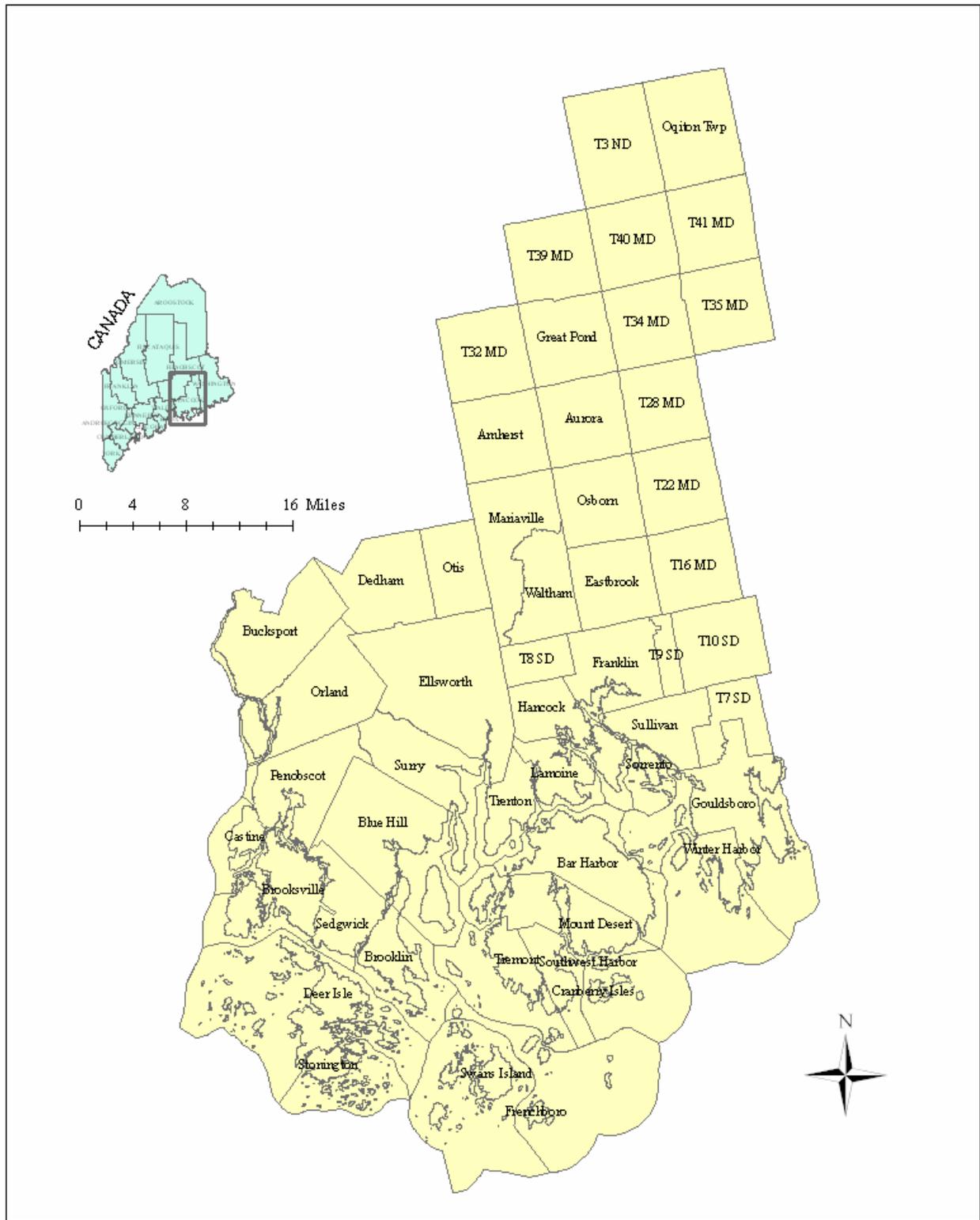


Figure 1. Communities in Hancock County, Maine. [T8 SD is now known as Fletchers Landing Township.]

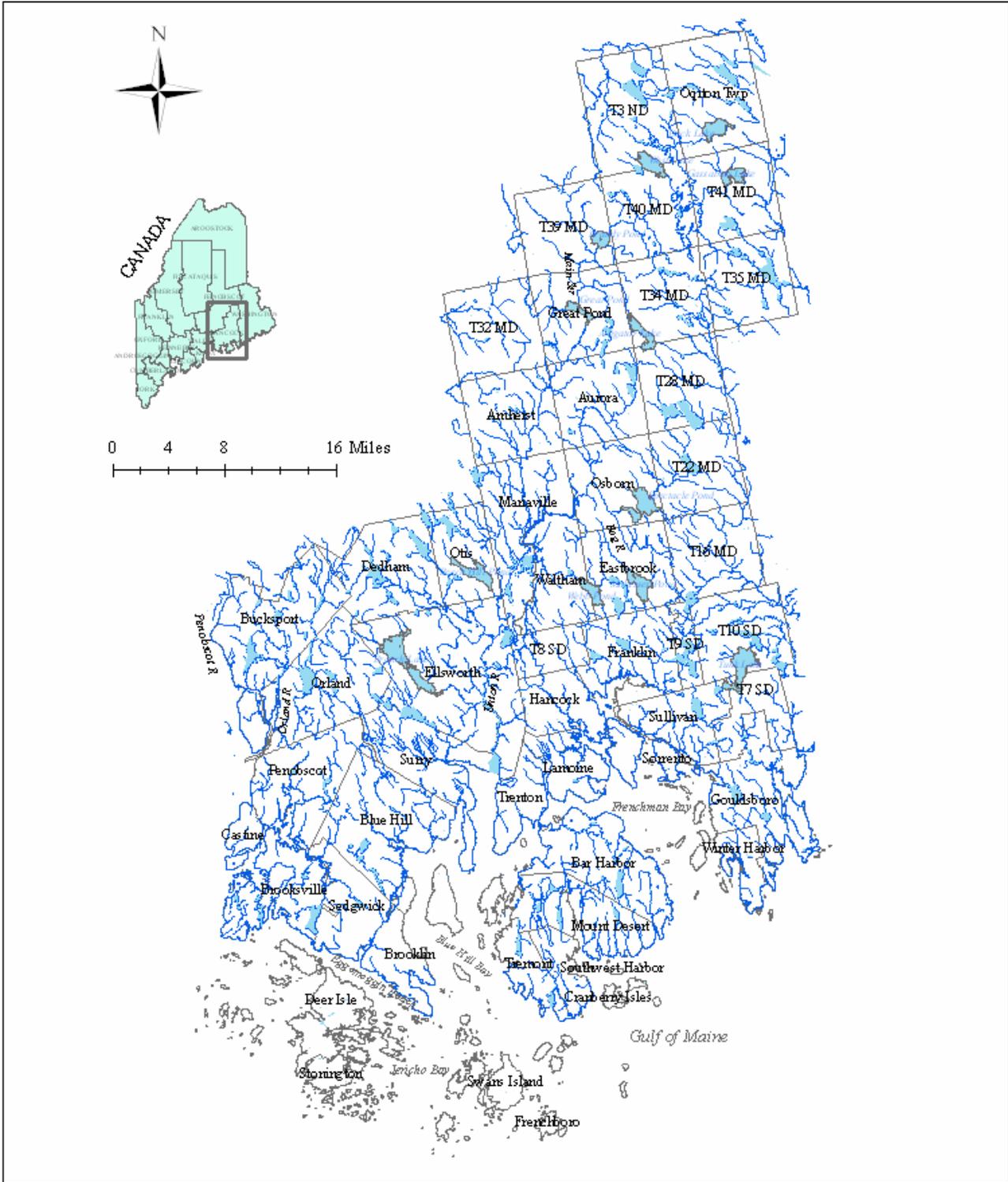


Figure 2. Hydrology of Hancock County, Maine. [T8 SD is now known as Fletchers Landing Township]

Section 2. Available Flood-Mapping Data and Mapping Needs

Flood-mapping data and mapping needs were compiled as part of this effort by means of state and community contacts, community scoping meetings, and manual and on-line data searches. This report is a comprehensive compilation of data acquired for scoping tasks relating to Hancock County.

Community FISs and FIRMs

Hancock County includes 20 communities that have FIRMs with active FIS reports and 9 communities that have FIRMs with only unnumbered A-zones (table 1). The towns of Eastbrook, Franklin, and Waltham have FIRMS and are included in these statistics but presently are suspended from the program¹. Hancock County also has six communities with flood hazard boundary maps (FHBMs).

Of the towns in the program, Mariaville has the oldest effective FIS date (March 14, 1975) and Cranberry Isles (July 15, 1992) the most recent effective FIS date. Seven percent of the FIRMs in Hancock County are 20 years old or older; 100 percent are 14 years or older. The oldest FIRM is 21 years old, the most recent is 14 years old, and the average age is approximately 19 years. The average age of the FHBMs is 29 years. It is important to note that the effective map date is the date the map was last revised. Some revisions were minor adjustments and did not affect entire map panels. As a result, much of the information depicted on the county's floodplain maps is likely to be older than the average ages reported above.

State of Maine Best Available Data (BAD) for Unnumbered A-Zones

The MFMP has developed a data set that tabulates information about the best available data (base flood elevations) for water bodies designated as unnumbered "A" zones on flood maps for communities throughout the State. The base flood elevations tabulated in this data set are derived from hydrologic and(or) hydraulic studies of water bodies that may be published in FISs for adjacent communities or published as part of flood studies not directly related to FEMA FISs (e.g. Army Corps of Engineer projects, Natural Resources Conservation Service projects, and Letter of Map Changes). These data are used in this report as part of the prioritization of mapping needs for a community (see section: Scope and Prioritization of Mapping Needs in Hancock County). These data are documented in Appendix B for each community. Information about these data is available from the MFMP web site at: <http://www.state.me.us/spo/flood/bad/>, accessed on September 8, 2006.

Letters of Map Change (LOMCs)

A Letter of Map Change (LOMC) is a letter issued by FEMA in response to a request to revise or amend an effective NFIP map to remove a property or reflect changed flooding conditions on the effective map. LOMCs may include Letters of Map Amendments (LOMAs), Letters of Map Revisions (LOMRs), and Letters of Map Revision based on Fill (LOMR-F) as defined below:

- LOMAs: A LOMA is an official amendment, by letter, to an effective NFIP map. A LOMA establishes the property location in relation to the Special Flood Hazard Area (SFHA). There is no appeal period for LOMAs, and the letter becomes effective the date that it is sent.

¹ Communities are required to adopt and enforce a floodplain management ordinance that meets minimum NFIP requirements. Communities that do not enforce these ordinances can be placed on probation or suspended from the program.

- LOMRs: A LOMR is an official revision, by letter, to an effective NFIP map. A LOMR may change flood-insurance risk zones, floodplain and(or) floodway boundary delineations, planimetric features, and(or) Base Flood Elevations (BFEs). The effective date of a LOMR depends on the type of change requested. For example, some LOMRs are effective on the date that the letter is issued and others become effective following an appeal period (typically 30 to 90 days or 6 months).
- LOMR-F: A Letter of Map Revision based on Fill (LOMR-F) may be filed as a special case of the LOMR. A LOMR-F provides FEMA's determination concerning whether a structure or parcel has been elevated on fill above the BFE and excluded from the SFHA. A LOMR-F is an official revision, by letter, to an effective NFIP map. The letter becomes effective on the date that it is sent.

In addition to the categories above, *conditional* LOMAs, LOMRs, and LOMR-Fs may be issued by FEMA to comment on a proposed project or change. The letter does not revise an effective NFIP map, but indicates whether the project, if built as proposed, would be recognized by FEMA.

LOMCs in Hancock County

The presence and number of LOMCs in a community can be an indication of increasing development in a community and(or) problematic flood hazard boundaries. LOMCs are used in this report as part of the prioritization of mapping needs for a community (see section: Scope and Prioritization of Mapping Needs in Hancock County). LOMC data for Hancock County are summarized in table 3. A GIS digital data set representing georeferenced locations of LOMCs in Hancock County was created as part of the scoping effort and uploaded to the watershed information system (WISE, a software package used by FEMA to catalogue scoping needs) database.

Table 3. Summary of letters of map change (LOMCs) in Hancock County, Maine.

[CID, Community Identification number]

Community name	CID	Effective map date	Map age, in years	Number of LOMCs
Bar Harbor, Town of	230064	5/2/1991	15	17
Blue Hill, Town of	230274	5/3/1990	16	33
Brooklin, Town of	230275	3/1/1987	19	2
Brooksville, Town of	230276	5/15/1991	15	8
Castine, Town of	230277	5/2/1991	15	9
Cranberry Isles, Town of	230278	7/15/1992	14	1
Dedham, Town of	230279	4/18/1975	31	8
Deer Isle, Town of	230280	5/2/1991	15	13
Eastbrook, Town of	230281	4/18/1975	31	2
Ellsworth, City of	230066	11/4/1988	18	15
Fletchers Landing, Township of	230458	10/1/1986	20	1
Franklin, Town of	230282	7/16/1991	15	3
Gouldsboro, Town of	230283	6/4/1987	19	29
Hancock, Town of	230284	6/3/1991	15	17
Lamoine, Town of	230285	5/2/1991	15	32
Mariaville, Town of	230286	3/14/1975	31	13
Mount Desert, Town of	230287	8/2/1990	16	1
Orland, Town of	230288	2/4/1987	19	9
Penobscot, Town of	230290	7/16/1991	15	9
Sedgwick, Town of	230291	2/4/1987	19	3
Sorrento, Town of	230292	9/4/1985	21	6
Southwest Harbor, Town of	230293	6/3/1991	15	3
Stonington, Town of	230294	6/3/1991	15	4
Sullivan, Town of	230295	9/4/1985	21	4
Surry, Town of	230296	5/2/1991	15	31
Swans Island, Town of	230297	3/1/1987	19	14
Tremont, Town of	230298	8/2/1990	16	4
Trenton, Town of	230299	8/2/1990	16	18
Winter Harbor, Town of	230302	5/15/1991	15	3

Community Flood Ordinances

The MFMP provides all participating communities (92 percent of the State’s communities) with model floodplain management ordinances, guidance and review, and maintains all community flood ordinances on file. The contact for community flood ordinances is the MFMP:

Brigitte Ndikum-Nyada
Planning and Research Associate
Maine Floodplain Management Program
State Planning Office
184 State Street, 38 SHS
Augusta, ME 04333
Tel: 207-287-8932
Fax: 207-287-6489

Mapping Needs Update Support System (MNUSS)

In accordance with section 575 of the National Flood Insurance Reform Act of 1994 (Federal Emergency Management Agency, 1994), FEMA assesses “...the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established based on an analysis of all natural hazards affecting flood risks.” FEMA initiated the Mapping Needs Assessment (MNA) process, which identifies and prioritizes flood hazard mapping needs for communities nationwide. As part of this effort, FEMA developed the MNUSS, which is an interactive, web-based software application that maintains an inventory of needs for future map updates. In particular, MNUSS stores information on the following two types of update needs:

- **Map Maintenance Needs:** Includes changes to base map information, such as the addition of new roads, changes to corporate limits, and incorporation of LOMCs.
- **Flood Data Update Needs:** Includes changes to flood hazard areas as a result of changes in hydrologic and hydraulic conditions, changes to BFEs, and(or) changes in the floodplain delineation.

Mapping needs may be viewed and entered into MNUSS by a variety of parties, including FEMA, state NFIP coordinators, study contractors, Cooperating Technical Partners (CTPs), and other Federal agencies, such as the U.S. Army Corps of Engineers (USACE) and the USGS. All potential entries are reviewed and approved by the FEMA MNUSS controller prior to entry into the system.

A total of 145 MNUSS records exist for 15 communities in Hancock County. Of the entries on record, 35 (about 24 percent) appear to be duplicate entries, 74 (about 51 percent) appear to be placeholder entries for the towns, townships, and islands for which no other entries exist, and 36 are valid, unique entries. (The 74 placeholder entries are identified as having no need identification numbers or any other MNUSS-related data.) Of the 36 valid, unique MNUSS records, 15 (42 percent) will be addressed by the DFIRM process (mis-labeled roads and so forth), 16 (44 percent) can be resolved by restudying the affected waterbody, 3 (8 percent) identify needs for studies in towns that have had none to date (Mariaville, Orland, and Swans Island), and 2 (6 percent) are invalid requests for the addition of elevation reference marks to FIRMS. Of the 19 MNUSS entries that could affect BFEs, 16 (84 percent) are expected to increase the BFE by more than 5 ft, 1 (5 percent) is expected to increase the BFE by 1 to 5 ft, and 2 (11 percent) are expected to decrease the BFE by 1 to 5 ft. The 36 valid MNUSS entries for Hancock County are summarized in table 4.

For the scoping process, existing entries in MNUSS were retrieved by USGS and reviewed with MFMP and community representatives. The review process resulted in the identification of duplicate, outdated, missing, and(or) erroneous entries. These findings will provide the basis for updates to MNUSS or its successor upon completion of the scoping report. Existing MNUSS entries are compiled in Appendix C.

Table 4. Summary of entries in the Mapping Needs Update Support System (MNUSS) for Hancock County, Maine.

[CID, Community Identification number; DFIRM, digital flood-insurance rate map; FIS, flood-insurance study; MFMP, Maine Floodplain Management Program; BFE, base flood elevation; --, not applicable]

Community name	CID	Number	MFMP comments	Anticipated BFE change
Bar Harbor	230064	3	Requires restudy	Increased By Greater Than 5 feet
Brooksville	230276	1	Requires restudy	Increased By Greater Than 5 feet
Cranberry Isles	230278	1	Requires restudy	Increased By Greater Than 5 feet
Cranberry Isles	230278	2	DFIRM process	--
Deer Isle	230280	2	Requires restudy	Increased By Greater Than 5 feet
Deer Isle	230280	2	DFIRM process	--
Ellsworth	230066	2	DFIRM process	--
Gouldsboro	230283	2	Requires restudy	Decreased By Between 1 and 5 feet
Gouldsboro	230283	3	DFIRM process	--
Hancock	230284	1	Not valid	--
Mariaville	230286	1	FIS required	Increased By Greater Than 5 feet
Mariaville	230286	1	DFIRM process	--
Mount Desert	230287	2	Requires restudy	Increased By Greater Than 5 feet
Orland	230288	1	FIS required	Increased By Between 1 and 5 feet
Orland	230288	1	DFIRM process	--
Southwest Harbor	230293	1	Requires restudy	Increased By Greater Than 5 feet
Southwest Harbor	230293	1	DFIRM process	--
Stonington	230294	2	Requires restudy	Increased By Greater Than 5 feet
Stonington	230294	1	DFIRM process	--
Swans Island	230297	1	FIS required	Increased By Greater Than 5 feet
Tremont	230298	1	Not valid	--
Winter Harbor	230302	2	Requires restudy	Increased By Greater Than 5 feet
Winter Harbor	230302	2	DFIRM process	--

Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs)

CAVs and CACs provide assistance to communities regarding the administration and enforcement of their floodplain management ordinances (table 5). A CAV is a scheduled visit (on the date opened) to an NFIP community for the purpose of conducting a comprehensive assessment of the community’s floodplain management program. A CAC is used to establish a contact with a community for the purpose of determining if any problems or issues exist and to offer the community assistance if necessary. CACs can be conducted by means of a telephone call or brief visit. “Date closed” refers to the date that the results of the assistance call or visit is finalized. CAV and CAC data for the county are presented in table 4. All CACs and CAVs were conducted by the State of Maine.

Table 5. Summary of Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs) in Hancock County, Maine.

[CID, Community Identification number; --, no close date]

CID	Community name	Date opened	Agency	Type	Date closed
230064	Bar Harbor	23-Aug-99	STATE	CAC	26-Nov-99
230274	Blue Hill	30-Sep-99	STATE	CAV	10-May-00
230275	Brooklin	03-Mar-93	STATE	CAC	--
230276	Brooksville	15-Dec-93	STATE	CAC	22-Mar-94
230277	Castine	12-Feb-93	STATE	CAC	19-Feb-93
230278	Cranberry Isles	16-Sep-92	STATE	CAV	04-Dec-92
230280	Deer Isle	23-Sep-92	STATE	CAC	29-Sep-92
230280	Deer Isle	23-Sep-03	STATE	CAC	--
230281	Eastbrook	16-Oct-02	STATE	CAC	--
230066	Ellsworth	16-Aug-00	STATE	CAC	09-Feb-01
230066	Ellsworth	26-Jul-05	STATE	CAC	--
230283	Gouldsboro	23-Sep-92	STATE	CAC	29-Sep-92
230283	Gouldsboro	29-Sep-05	STATE	CAC	--
230284	Hancock	24-Sep-92	STATE	CAC	29-Sep-92
230285	Lamoine	23-Aug-94	STATE	CAC	07-Oct-94
230287	Mount Desert	22-Sep-94	STATE	CAV	08-Dec-94
230288	Orland	29-Jul-93	STATE	CAC	--
230290	Penobscot	12-Aug-96	STATE	CAC	--
230290	Penobscot	27-Aug-03	STATE	CAC	--
230291	Sedgwick	28-Sep-93	STATE	CAC	05-Oct-93
230291	Sedgwick	08-Sep-03	STATE	CAC	--
230292	Sorrento	16-Aug-03	STATE	CAV	--
230292	Sorrento	08-Sep-93	STATE	CAC	--
230293	Southwest Harbor	19-Dec-91	STATE	CAV	04-Sep-92
230294	Stonington	12-Sep-95	STATE	CAC	--
230296	Surry	03-Sep-93	STATE	CAC	--
230297	Swans Island	24-Aug-99	STATE	CAC	11-May-00
230298	Tremont	17-Jul-92	STATE	CAV	--
230298	Tremont	14-Jul-98	STATE	CAV	--
230299	Trenton	29-Apr-91	STATE	CAC	03-Jun-91
230299	Trenton	13-Sep-04	STATE	CAC	--
230299	Trenton	25-Aug-98	STATE	CAC	21-Oct-99
230302	Winter Harbor	15-Sep-95	STATE	CAC	08-Jul-96

GIS Data

Most GIS data in Maine reside with the Maine Office of GIS (MEGIS) as the agency acts as a central repository for these data. Although not every community shares their GIS data with MEGIS, many data sets are shared and served over the Internet. Data can be accessed on the MEGIS web site at: <http://apollo.ogis.state.me.us/>. Community-specific data that is not shared with MEGIS are documented as part of the community scoping-meeting process (see interview data in Appendix B). All data served by MEGIS are referenced to North American Datum 1983 (NAD83), Universal Transverse Mercator (UTM) Zone 19, in meters (m), and are available to FEMA.

Base Map Data

Base map layers maintained by MEGIS include features such as roads, streams, and political boundaries. Base map data layers have been acquired from a variety of sources including the USGS data and represent many of the feature types found on USGS topographic maps. More recently developed data were derived from various sources providing improved base map accuracy. Existing coverages maintained by MEGIS can be linked to or viewed at the following URL: <http://apollo.ogis.state.me.us/>

All of Hancock County has grayscale digital orthophotography available at 1-meter resolution, in which each image pixel represents a planimetric square 1 meter on a side. Community-specific aerial photographs are documented as part of the community scoping-meeting process (see Appendix B).

The following towns indicated during the interview process that they have base-map data available in some form:

Bar Harbor – aerial photography, black and white, 2005.

Bucksport – aerial photography, unknown type and date.

Deer Isle – aerial photography, 1970s and 1980s.

Lamoine – aerial photography, black and white, 1970s, maybe 1:800 scale.

Mount Desert – aerial photography, black and white, 1980s. Future budgets may allow acquisition of more aerial photography.

Stonington – aerial photography. For details contact the town manager, (207) 367-2351.

Trenton – aerial photography, black and white, date unknown.

Topographic Data

Digitally scanned USGS 7.5-minute quadrangles provide topographic data for the entire state of Maine with 10- and 20-ft contour intervals, variable by location. Digital Elevation Models (DEM) also are available through the USGS National Elevation Dataset (NED). The NED has been developed by merging the highest-resolution, best quality elevation data available across the United States into a seamless raster format. NED horizontal datum for Maine is NAD83 and vertical datum is North American Vertical Datum 1988 (NAVD88). The NED is continually updated as best available DEM data become available. DEM data with 30-m resolution (each raster pixel represents a planimetric square 30 m on a side) are available for the entire state of Maine. DEM data with 10-m resolution (1/3 arc second) are available for the entire state of Maine except for extreme northern Somerset and Oxford Counties. DEM data can be downloaded through the USGS Seamless Data Distribution Web site at <http://seamless.usgs.gov/web/site/seamless/viewer.ph>.

As part of the map modernization process, the MFMP and the Maine Geological Survey completed an assessment of topographic changes in coastal areas by coastal erosion (Dickson, 2003). This report is available online at <http://www.state.me.us/doc/nrimc/mgs/explore/marine/firms/contents.htm>.

The Maine Department of Transportation (MDOT) routinely collects detailed topographic data for highway projects. The data are typically limited to an area within 300 ft of the centerline of the highway. The scope, scale, and accuracy of the data are project specific and depend on the flight level of the survey. MDOT does not maintain any kind of searchable database cataloging these data. The MDOT Survey and Photogrammetric Group is willing to search their files for available data if they are provided a GIS shapefile of an area of interest. The primary contact for topographic data from the MDOT Survey and Photogrammetric Group is Tim Liseige, Photogrammetric and Control Engineer, (207) 624-3493, tim.liseige@maine.gov. One MDOT project (# 56171), dated 1964, intersects Leonard Lake in Ellsworth; Leonard Lake is one of the waterbodies that have been identified as needing updated flood-insurance studies for Hancock County (see *Prioritization of Waterbodies in Hancock County*). No MDOT projects intersect coastal zones in Hancock County.

Community-specific topographic data are documented as part of the community scoping-meeting process (see Appendix B). The following municipalities indicated during the interview process or to the State Planning Office that they have topographic data in some form:

Bar Harbor – maybe (town did not return phone call to confirm).

Lamoine – based on aerial photography, 1996, contour interval unknown.

Stonington – maybe; contact the town manager, (207) 367-2351.

Hydrography Data

MEGIS, in cooperation with the USGS, is currently enhancing Maine's 1:24,000 digital hydrography data to create National Hydrography Dataset (NHD) high-resolution data (spatial data describing hydrologic features). The NHD data are partitioned into the following layers: streams, ponds, rivers, coast, and National Wetlands Inventory (NWI) data. Progress in this effort is ongoing—the current status of these data can be determined by contacting MEGIS at (207) 624-8800 or by visiting their web site <http://apollo.ogis.state.me.us/>. NHD data are available for download from the NHD geodatabase at <http://nhdgeo.usgs.gov/viewer.htm>.

Community-specific hydrography data are documented as part of the community scoping-meeting process (see Appendix B). The following towns indicated during the interview process that they have hydrography data available in some form:

Bucksport – 100-year flood marks done by Natural Resources Conservation Service.

Lamoine – 1983 Gerber ground-water report through University of Maine at Orono. Also have some ground-water-level monitoring in gravel pits.

Stonington – maybe; contact director of water company, (207)367-2351.

Community GIS Contact Information

GIS contact information obtained through community scoping meetings is provided in Appendix B for each community as part of the interview data. The communities of Bar Harbor, Ellsworth, Lamoine, Mount Desert, and Stonington indicated that they have GIS resources.

Community Meetings and Contacts

A community scoping meeting was held for Hancock County at the Ellsworth Public Library on Thursday, December 14, 2006, from 12:30 p.m. to 2:30 p.m. An invitation letter (with agenda) specifying the time, place, and purpose of the meeting was mailed to at least two community officials in every municipality. The letters were addressed to the community code enforcement officer and to the community manager or first select person. Example copies of the letter and meeting agenda are attached to this report. Most of the communities participated by meeting, mail, or phone.

The goals of this meeting were to:

- Inform the communities of the nature and the intent of the flood map update process, and
- Solicit community input and discuss the flood-prone areas that communities would like to include as a part of the flood map update.

Robert Dudley, USGS Maine Water Science Center, and Tom Marcotte, MFMP, conducted the meeting. Other representatives of USGS and MFMP in attendance were Michael Montagna and Ellen O'Brien (MFMP) and Charles Schalk, Pamela Lombard, and Joshua Kempf (USGS). Fifteen community representatives from 21 towns were provided an overview of the Map Modernization program and the map production schedule and technical process.

The latter part of the meeting involved breaking out into small groups of community representatives with group leaders from USGS and MFMP. The group leaders administered and assisted with the completion of map needs interview forms (example attached, Appendix D). Community representatives were provided copies of their community's flood maps and were encouraged to document problem areas, concerns, and so forth, as necessary. Printed aerial photographs of each community were provided by Sarah Widing of ENSR (contractor to MFMP). Community representatives were asked to explain and prioritize their needs if possible. The marked-up flood maps reside with the MFMP.

MNUSS entries were reviewed with community representatives for verification. The following three common issues were identified: (1) many MNUSS entries address needs which would be fulfilled with improved base maps such as street locations, street names, and overall difficulty using the map due to lack of distinguishing ground features; (2) lack of good topographic controls in coastal areas; and (3) the field indicating "anticipated BFE change" was commonly confused with how much the community thought the BFE was in error—for example, the field may indicate "Increased By 1 to 5 feet" but the need notes may indicate a hydraulic structure change that would result in a lower BFE, so in this case the "anticipated BFE change" field is populated with a value of how much the community thinks the BFE is in error rather than how much the BFE is expected to change should the reach be restudied.

During the scoping meetings, the MFMP's Best Available Data (BAD) were reviewed with each community representative if BAD data existed for that community. The review was done to make the community aware of the information if they were not already aware of it, and to solicit input on BAD data if any additional information was available to the community that was not listed in the MFMP's BAD database.

The following three subject areas encompass the data gathered from the scoping meeting process and completion of interview forms: (1) community contact information—in many cases, contact information was updated, (2) areas of the existing flood maps where there are significant problems (poor mapping or development pressures) or changes to hydrologic/hydraulic conditions, and (3) community mapping resources. Communities that did not attend the meetings were sent interview forms, MNUSS entries, and BAD and asked to review, complete, and return them. The data from the scoping meetings were entered into the WISE tool and are reported for each community in the Appendices as part of the interview data (Appendices A, B, and C).

A surveyor, Ed Pare, sent two letters to USGS after the scoping meeting to express his concerns with the status of mapping in eastern Hancock County (attached in Appendix D). His concerns were that (1) several towns, including Sullivan, Sorrento, and Swans Island, are operating with converted FHBM that have no elevations; (2) erroneous VE zones are shown in Hancock and Lamoine that appear to have resulted from failure to include barrier islands when the studies were done; and (3) shoreline detail is badly needed on the maps to prevent undue costs to the public.

Scope and Prioritization of Mapping Needs in Hancock County

Two prioritization schemes are presented in this section. The first scheme uses criteria provided by FEMA and MFMP to rank *communities* in Hancock County having the greatest need for updated mapping on the basis of risk, as quantified in census block-group data. This ranking meets the goals of the map modernization process as described in FEMA’s mid-course adjustment (Federal Emergency Management Agency, 2006). The second scheme uses the results of the first, plus additional information about waterbodies according to community and MFMP representatives, to rank *flood hazards* (waterbodies) in Hancock County having the greatest need for updated mapping. This ranking can be used by FEMA to maximize the benefit of any future engineering studies.

Prioritization of Communities in Hancock County

USGS staff (Robert Dudley, Charles Schalk) met with MFMP staff (Lou Sidell, Tom Marcotte) in July 2006 as an initial kick-off meeting for the scoping process. An action item resulting from that meeting involved MFMP staff arriving at a list of criteria that should be considered for prioritizing potential mapping needs of towns in the county. MFMP decided that the 8 criteria identified by FEMA during their midcourse adjustment were adequate for assessment of priority by town and(or) census block. These 8 criteria are based on block-group data provided by the U.S. Census Bureau and are used to compute census block group risk scores. Table 6 lists the criteria and their data source.

Table 6. Maine Floodplain Management Program criteria for prioritization of community-based flood mapping needs in Hancock County.

[FIA, Federal Insurance Administration]

Criterion	Data source
Population density	Census block group data
Housing unit density	Census block group data
Claims density	FIA Claims dataset
Repetitive losses claims density	FIA Claims dataset
Repetitive loss properties density	FIA Claims dataset
Policies density	County distribution
Disasters	County distribution
Population growth from 1990-2000	County distribution

Scores for each of the criteria listed in table 6 were calculated and normalized for each census block group included in Hancock County. The normalization process encompassed two steps. First, the calculated value for each block group was compared with the range of values calculated for all block groups in the State of Maine. In this way, scores calculated for Hancock County would be scaled consistently with those calculated for every other county in Maine. Second, the logarithm of the calculated and scaled value for each block group was taken to place the scaled values in the range of 0 to 10. This was to equalize the weight of each of the scoring criteria. After the data had been normalized, the maximum census block group risk score for each town was recorded.

Results of the community-based flood mapping assessment on the basis of census block groups are shown in table 7. The communities of Mount Desert, Ellsworth, Frenchboro, and Tremont scored highest. After reviewing the results, MFMP determined them to be reasonable and in accord with their understanding of community-based mapping needs in Hancock County. Scoring results by census block group are provided in Appendix E.

Table 7. Maine Floodplain Management Program criteria for prioritization of community-based flood mapping needs in Hancock County.

[CID, community identification number; CBG, census block group]

Community	CID	Maximum CBG risk score
Mount Desert, Town of	230287	34.41
Ellsworth, City of	230066	33.86
Frenchboro, Town of	230594	33.11
Tremont, Town of	230298	33.11
Hancock, Town of	230284	31.15
Castine, Town of	230277	30.76
Southwest Harbor, Town of	230293	30.66
Bar Harbor, Town of	230064	30.48
Trenton, Town of	230299	29.90
Surry, Town of	230296	29.45
Lamoine, Town of	230285	28.89
Blue Hill, Town of	230274	28.29
Sedgwick, Town of	230291	27.93
Orland, Town of	230288	27.25
Deer Isle, Town of	230280	27.14
Brooksville, Town of	230276	26.97
Bucksport, Town of	230065	26.47
Brooklin, Town of	230275	26.34
Penobscot, Town of	230290	25.72
Sullivan, Town of	230295	25.65
Otis, Town of	230289	25.20
Cranberry Isles, Town of	230278	25.10
Stonington, Town of	230294	24.66
Dedham, Town of	230279	24.32
Franklin, Town of	230282	23.90
Sorrento, Town of	230292	23.78
Fletchers Landing, Township of	230458	23.49
Mariaville, Town of	230286	23.49
Winter Harbor, Town of	230302	22.94
Gouldsboro, Town of	230283	22.93
Swans Island, Town of	230297	22.25
Aurora, Town of	230273	14.67
Eastbrook, Town of	230281	14.67
Great Pond, Town of	230596	14.67
Osborn, Town of	230595	14.67
T32 MD, Township of	230706	14.67
T03 ND, Township of	230597	10.04
T07 SD, Township of	230598	10.04
T09 SD, Township of	230704	10.04
T10 SD, Township of	230599	10.04
T16 MD, Township of	230705	10.04
T22 MD, Township of	230600	10.04
T28 MD, Township of	230601	10.04
T34 MD, Township of	230707	10.04
T35 MD, Township of	230708	10.04
T39 MD, Township of	230709	10.04
T40 MD, Township of	230710	10.04
T41 MD, Township of	230711	10.04

Prioritization of Waterbodies in Hancock County

Many towns and(or) census blocks in Hancock County are separated from neighboring towns and(or) census blocks by bodies of water that may need new or revised studies. In cases such as these, ranking the waterbodies in order of priority can promote most efficient use of limited resources for study in Hancock County. When a waterbody that serves as a boundary among several towns receives funding for study, then all of the towns that have that waterbody as a boundary can benefit from the results of the study.

Mapping needs for waterbodies were grouped into one of four different types of studies required to create or update flood hazard zones.

- **Baseline–DFIRM only:** The most economical method of creating a countywide DFIRM is through digitizing flood-hazard information from the effective FIRMs and FISs onto new mapping. This baseline option is currently being undertaken by MEGIS and other FEMA contractors.
- **Redelineation:** Existing hydrologic and hydraulic studies of the water body are adequate and the water body requires only the redelineation of the base flood elevations using updated topographic data.
- **Limited Detailed Study:** Automated tools are used to produce digital information or flood mapping for the water body in question has already been studied in detail and requires limited technical reworking of the hydrologic and(or) hydraulic analysis or the water body in question has not been studied in detail but it is expected that approximate methods would suffice to adequately map the flood hazard.
- **Detailed Study:** Can be performed to develop the digital information, including field surveyed cross-sections and structures. Because this is the most expensive type of study that FEMA can perform, the scope of the detailed study may be limited.

Note that Detail and Limited Detail studies are also assumed to need redelineation using updated topographic data, incorporating results from the new hydrologic and(or) hydraulic analyses.

USGS staff (Robert Dudley, Charles Schalk) met with MFMP staff (Lou Sidell, Tom Marcotte) on December 19, 2006, to review interview data and marked-up maps and to arrive at an initial list of mapping needs by waterbody for the county. The mapping needs derived through these meetings were entered into the WISE scoping application. During this meeting, the criteria listed in table 8 were identified as necessary to the ranking of waterbodies and the type of study needed for each waterbody was identified. Descriptions of these criteria are provided in the text following table 8.

Table 8. Maine Floodplain Management Program criteria and qualitative weight for prioritization of waterbody-based flood mapping needs in Hancock County.

[MFMP, Maine Floodplain Management Program; LOMC, Letter of Map Change]

Community prioritization criteria	Weight	Range	Score
Ranking from census block-centered analysis	3	22.9 – 34.4	One-eighth of value; theoretical maximum = 10 points
Community and(or) MFMP priority	1	1 - 3	1 = highest = 10 points 2 = medium = 6 points 3 = lowest = 3 points
Connectivity	1	1 – 4	One point per connected community
Map age, in years	1	14 – 32	0.3 point per year
Map type	1	b, c, d, e	b = unnumbered A-Zone : 10 points c = map with elevations : 6 points d = map with elevations and floodways: 3 points e = map with coastal velocity zones: 3 points
Number of LOMCs	1	0 – 22	0.5 point per LOMC
Presence of best available data	1	Yes / No	Yes = 10, No = 0

In most cases, towns identified their highest waterbody mapping priorities during the scoping meeting. In some cases, priority was indicated by MFMP during the December 19 meeting on the basis of historically documented mapping needs of the towns. Higher priority was given to A-zone waterbodies with existing BAD where maps could be created or greatly improved by simply collecting improved topographic information and redelineating existing detailed base flood elevations. Higher priority was given to waterbodies that had been historically documented as a mapping need in either the MFMP’s Database or MNUSS or both. Historical documentation of a mapping need is indicative of an ongoing need that has been known to be a need in the past. Priority was ranked from 1 (highest) to 3 (lowest). Many towns indicated more than three waterbodies that need to be addressed; in these cases, all waterbodies ranked as lowest priority were given a priority ranking of 3.

Higher priority was given to waterbodies with high connectivity, where connectivity is a measure of the number of neighboring communities that are adjacent to or would otherwise benefit from improved mapping of a particular water body. For example, an A-zone river reach that connected to a detailed study upstream or spanned multiple communities or a lake that bordered multiple communities would receive higher priority than a pond contained within the corporate limits of a single community.

Map age was calculated as the difference between December 2006 and the effective date of the map, in years. Several towns in Hancock County still operate with the “flat maps,” or FHBMs that had been converted to FIRMs by letter.

Type of map also was included as a criterion. Maps that do not include studies and contain no BFEs are (b). Maps with BFEs but no delineated floodways are (c). Maps with BFEs and floodways are (d). Maps that include coastal velocity zones are (e). Highest scores were assigned to those maps with least amount of detail (b, then c, then d and e).

Because the number of LOMCs issued for a community is indicative of flooding issues, LOMCs were included in the scoring criteria. LOMCs that were included in the scoring were (a) those that contained coordinate information and could be plotted with some degree of certainty on a map, and (b) those determined from the map to relate to a particular waterbody. Other LOMCs (those that could not be located or assigned to a particular waterbody) were not included in the scoring.

As described above, the presence of BAD is helpful to prioritize the mapping needs of waterbodies. Waterbodies for which BAD were available were given a score of 10, whereas those for which BAD were not available were given a score of 0. BAD that required engineering investigation to determine its validity received a score of 5.

Summing the scoring criteria produced a waterbody-based prioritized list of mapping needs involving redelineation, limited detail study, or detail study for each town participating in the survey (table 9, fig. 3). As an example, the redelineation of Graham Lake in Mariaville scored as follows:

Census-block ranking (* 3)	= 2.9 * 3 = 8.7
Community/MFMP priority	= 10 (highest priority)
Connectivity	= 4 (3 other towns would benefit)
Map age (scaled by years)	= 9.7 (32 years)
Map type	= 10 (unnumbered A zones)
Number of LOMCs (* 0.5)	= 2
Presence of BAD	= 10 (yes)
Sum	= 54.4

Table 9. Prioritized waterbody-based flood mapping needs in Hancock County requiring redelineation, limited detail study, or detail study.

Rank	Waterbody	Community	CID	Study type	Score
1	Graham Lake	Mariaville	230286	Redelineation	54.4
2	Atlantic Ocean, Eastern Bay	Lamoine	230285	Limited Detail Study	40.6
3	Atlantic Ocean, Flanders Bay	Sullivan	230295	Detail Study	37.6
4	Atlantic Ocean	Sorrento	230292	Detail Study	37.4
5	Leonard Lake	Ellsworth	230066	Limited Detail Study	37.2
6	Atlantic Ocean, Western Bay/Goose Cove	Trenton	230299	Redelineation	35.7
7	Atlantic Ocean	Gouldsboro	230283	Redelineation	34.5
8	Long Pond	Mount Desert	230287	Detail Study	32.9
9	Echo Lake	Mount Desert	230287	Detail Study	32.9
10	Branch Lake	Ellsworth	230066	Limited Detail Study	31.2
11	Atlantic Ocean, Frenchman Bay	Hancock	230284	Limited Detail Study	30.9
12	Atlantic Ocean, East Penobscot Bay	Deer Isle	230280	Redelineation	29.9
13	Atlantic Ocean, Taunton Bay	Franklin	230282	Redelineation	29.1
14	Atlantic Ocean, Sullivan Harbor	Hancock	230284	Limited Detail Study	28.4
15	Atlantic Ocean, Grindstone Point	Winter Harbor	230302	Redelineation	28.3
16	Atlantic Ocean	Cranberry Isles	230278	Redelineation	28.3
17	Atlantic Ocean, Eastern Bay	Mount Desert	230287	Detail Study	27.9
18	Old Mill Brook	Bar Harbor	230064	Limited Detail Study	27.2
19	Stony Brook	Bar Harbor	230064	Limited Detail Study	26.2
20	Fosters Brook	Trenton	230299	Limited Detail Study	26.2
21	Stanley Brook	Mount Desert	230287	Detail Study	25.4
22	Unnamed brook to Northwest Cove	Bar Harbor	230064	Redelineation	24.2

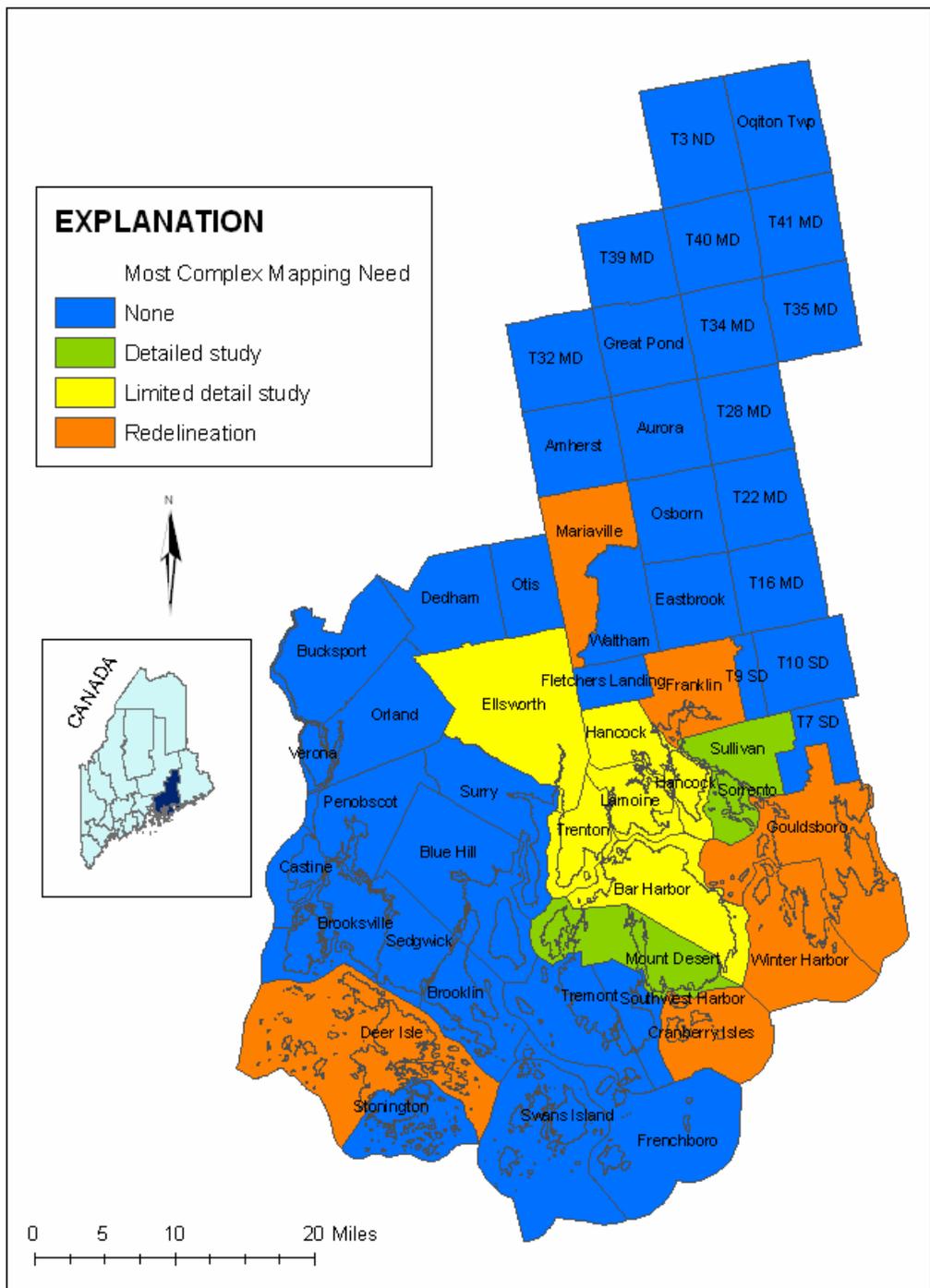


Figure 3. Types of waterbody studies needed by communities in Hancock County.

Project Time and Costs for Identified Mapping Needs

The USGS Maine Water Science Center will provide scoping-level time and cost estimates for the identified study needs for each water body listed in table 9. The time and cost estimates will include costs for hydrologic, hydraulic, and topographic data collection, analyses, and mapping, depending on the identified type of study needed for each water body. Detailed information regarding the length of reach to be studied and the spatial limits of each study will be provided. The time and cost estimates will be submitted to the cooperating agencies (FEMA, MFMP) as a separate document as set forth in the scope of work.

Project Alternatives

Costs can be reduced by cutting back on the level of effort for the hydrologic and hydraulic (H&H) analyses and(or) reducing the number of DFIRM panels.

Alternative H&H options that would help FEMA to reduce costs include reducing the study scope from a detailed study to a limited detail study or redelineation of current flood information only. Reducing the number of DFIRM panels by altering the mix of panel scales would lower the total panel count and reduce the estimated DFIRM production cost.

Section 3. Options for Future Mapping and DTM Preparation

Mapping Requirements

This section provides an assessment of the costs and benefits of utilizing the data cataloged in the previous section for the preparation of Digital Flood Insurance Rate Maps (DFIRMs) for Hancock County. Options are presented for using these data sets in various combinations and supplementing them with new data sets.

DFIRMs are produced from three broad categories of geospatial data: (1) Base Map, (2) Digital Terrain Model (DTM), and (3) Flood-Insurance Risk Zones. The spatial accuracy of each of these three categories is fixed by the specifications contained in the Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003 (Guidelines and Specifications). Proposed DFIRM panels for Hancock County are shown in fig. 4.

- **Base Maps:** Base maps are acquired from MEGIS and will be used by FEMA as a “backdrop” to the flood-insurance risk zones shown on the DFIRMs.
- **Digital Terrain Models (DTMs):** DTMs are used in conjunction with hydrologic and hydraulic models to interpret the limits of flood-insurance risk zones. DTMs represent terrain with irregularly-spaced spot elevations (x, y, z) and breaklines that indicate changes in ground slope at features such as the toe or top of channel banks or ridge lines. These data sets are generally photogrammetrically compiled by a mapping contractor from stereo photos and utilized in the form of a Triangulated Irregular Network (TIN) or a Digital Elevation Model (DEM). A DEM uses a regular grid, or raster, spacing of (x, y, z) points to represent the land surface. Each grid cell is assigned an average elevation to represent the elevation of the ground that is covered by the grid cell. A DEM represents the terrain surface with a mesh of regularly spaced points, whereas a TIN uses contiguous triangular planes.
- **Flood-Insurance Risk Zones:** Geographic boundaries produced by FEMA and provided in digital format.

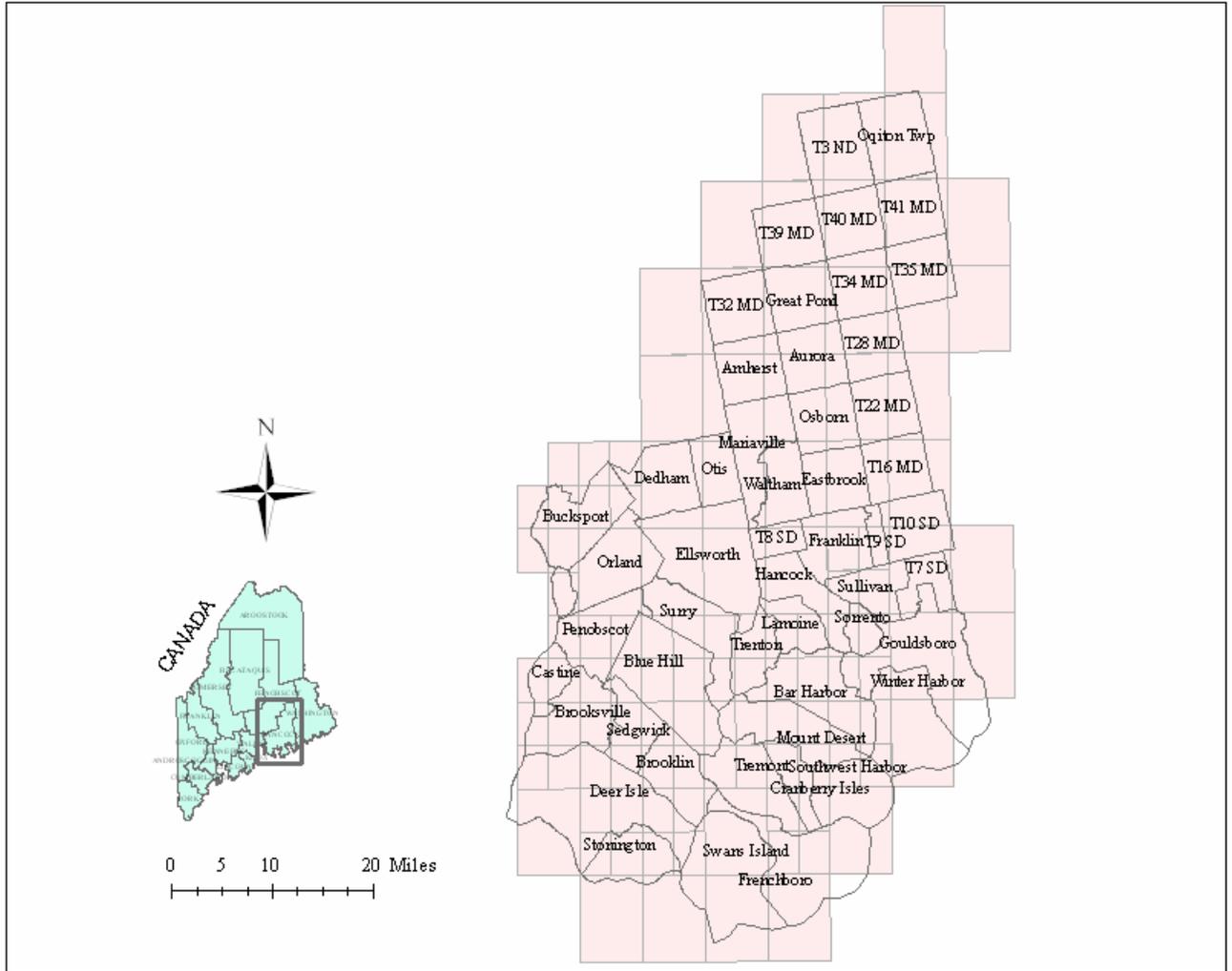


Figure 4. Proposed digital flood insurance rate map panels for Hancock County.

Base Map

Base maps are defined in the Guidelines and Specifications as the “map of the community that depicts cultural features (roads, railroad, bridges, dams, and culverts), drainage features, and corporate limits.” Depending on the source of the base map, the specific features found on DFIRMs may include the following data and features:

- Roads: centerlines, edge-of-pavement, right-of-way, names.
- Railroads: names.
- Bridges: names.
- Flood Control Structures: headwall, dam, levee, names.
- Airport Boundaries: names.
- Rivers: centerlines, banks, names.

- Streams: names.
- Lakes: names.
- Political Boundaries: county, municipality, special districts, wards, military reservations, Native American lands, names.
- Land Use: parks, individual land parcels, names.

The Guidelines and Specifications specify “absolute horizontal accuracy” for base map features to establish horizontal accuracy for the position of the digital data set to its actual location on the earth’s surface. The horizontal accuracy is specified as a statistical error distribution at the 95-percent confidence level and is specified in the Guidelines and Specifications as a function of finished map scale, as shown in table 10:

Table 10. Flood Insurance Rate Map (FIRM) Horizontal Accuracy.

FIRM map scale	Absolute horizontal accuracy at the 95-percent confidence level, in feet
1 in = 500 feet	19.0
1 in = 1,000 feet	38.0
1 in = 2,000 feet	45.6

MEGIS can provide digital mapping data for Hancock County for DFIRM production.

Digital Terrain Models (DTMs)

FEMA typically develops DTMs for the production of DFIRMS as they are not widely available at the accuracies required by FEMA. The DTMs are used in conjunction with hydrologic and hydraulic models to interpret flood boundaries and can be used by the community for many other purposes other than flood management.

Guidelines and Specifications identify the following four types of DTMs: (1) Digital contours, (2) Digital Elevation Models (DEMs), (3) Mass points and breaklines, and (4) Triangulated Irregular Networks (TIN). Each of these models can be created from the other and their use is application dependent.

Under FEMA guidelines, the allowable DTMs are as follows:

- Digital contours: continuous, nonintersecting lines of equal elevation separated by a specified elevation interval.
- Digital Elevation Model (DTM): x, y, and z coordinates of regularly spaced points that form a grid.
- Mass Points and Breaklines: x, y, and z coordinates of irregularly spaced points.
- Triangulated Irregular Network (TIN): contiguous triangles with x, y, and z values at the vertices and faces with slope and aspect.

The Guidelines and Specifications specify what is referred to as “absolute vertical accuracy” for DTMs, which relates the elevation of the land surface in the digital data set to its actual elevation relative to a specific vertical datum. The National Standard for Spatial Data Accuracy (NSSDA) is specified as a statistical error distribution at the 90- and 95-percent confidence level as a function of the specified contour interval as shown in table 11:

Table 11. National Standard for Spatial Data Accuracy (NSSDA).

NSSDA contour interval	NSSDA 90-percent confidence interval	NSSDA 95-percent confidence interval
2 feet	1 foot	1.2 feet
4 feet	2 feet	2.4 feet

Contouring and DEMs are not printed on DFIRMS so their vertical accuracy is not labeled on the DFIRMS, but it is recorded in the metadata of elevation datasets used for hydrologic and hydraulic modeling.

Neither USGS nor MEGIS has elevation data suitable for hydraulic modeling by detailed methods and communities were contacted to find topographic or elevation data suitable for hydraulic modeling (e.g. 2-foot or 4-foot contours) (approximate and limited-detailed studies can often be done with less rigorous topographic standards). Community specific topographic data will be used if it meets FEMA standards. New elevation data will be developed as necessary.

DTM development options include (1) obtaining countywide DTM data that covers all communities and (2) obtaining DTM data only for selected floodplain areas as needed to support a detailed study, limited detailed study, restudy or re-delineation of flood hazard areas. Obtaining DTM data on a countywide basis is expensive; most of the acquired data would be outside of the floodplain and not needed for hydraulic analysis. If FEMA obtains new DTM data for selected areas as needed, keeping in mind that is most cost effective to consolidate areas, where possible, and optimizes flights, the unit costs could be reduced.

Flood-Insurance Risk Zones

Flood-insurance risk zones are created by FEMA to set insurance rates and manage the floodplain. Flood-insurance risk zone accuracy requirements are not specified in the Guidelines and Specifications but can be described in terms of the combined accuracies of the base map, DTM, and the hydrology and hydraulic simulation models.

FEMA flood insurance rate 100- and 500-year flood zones are being converted to digital data layers by MEGIS for each community participating in the NFIP in Maine. These datasets were developed by direct digitization of FIRM maps using data registration techniques that produced the best-fit registration to community boundaries or other suitable features.

The most common comment by community representatives was that a better base map is needed to allow easier determination of where the risk zone boundaries are relative to the existing features such as roads and buildings.

Section 4. References Cited

- Federal Emergency Management Agency, 1994, Title V–National Flood Insurance Reform; available on the Web at URL <http://www.fema.gov/pdf/nfip/riegle.pdf>, accessed January 8, 2007.
- Federal Emergency Management Agency, 2006, Flood map modernization mid-course adjustment: accessed on December 12, 2006, at <http://www.fema.gov/library/viewRecord.do?id=2195>
- Maine Department of Health and Human Services, 2006, Public water sources: available on the Web at URL <http://www.maine.gov/dhhs/eng/water/forms/County%20Lists/July2006/Hancock.htm>, accessed September 16, 2006.
- University of Maine, 2004, Maine census data, population totals: Fogler Library, University of Maine, at URL <http://www.library.umaine.edu/census/>, accessed September 16, 2006.

Appendices

**Appendix A: Community Contacts and Best Available Data:
Hancock County**

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Bar Harbor, Town of

CID 230064 Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 5/2/1991

Participating=Yes LURC: No

Ordinance Date: 4/19/2005

Total No. NFIP Policies=19 No. Claims Since 1978= 7

All LOMCs: 17

Dana Reed 207-288-4098
Town Manager
Town of Bar Harbor
93 Cottage St.
Bar Harbor ME 04609

Angela Chamberlain, CEO 207-288-3523
93 Cottage St.
Bar Harbor ME 04609

Best Available Data:

Mapping Status:

Mapping Needs: 1997 Map Needs Rpt - coastal study needs updating

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Brooklin, Town of

CID 230275 Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 3/1/1987

Participating=Yes **LURC:** No

Ordinance Date: 4/9/1999

Total No. NFIP Policies=3 **No. Claims Since 1978=** 0

All LOMCs: 2

Robert Tapley 207-359-8394
Selectmen
Town of Brooklin
PO Box 219
Brooklin ME 04616

Judith Jenkins, CEO 207-374-5192
PO Box 144
Penobscot ME 04476

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Brooksville, Town of

CID 230276 Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 5/15/1991

Participating=Yes **LURC:** No

Ordinance Date: 3/5/1991

Total No. NFIP Policies=3 **No. Claims Since 1978=** 0

All LOMCs: 8

Richard Bakeman 207-326-4518
Selectmen
Town of Brooksville
1 Town House Rd.
Brooksville ME 04617

Lewis Hutchins, CEO 207-374-5194
PO Box 553
Blue Hill ME 04617

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Castine, Town of

CID 230277

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 5/2/1991

Participating=Yes **LURC:** No

Ordinance Date: 3/26/2001

Total No. NFIP Policies=9 **No. Claims Since 1978=** 6

All LOMCs: 9

Dale Abernethy 207-326-4502
Town Manager
Town of Castine
PO Box 204
Castine ME 04421

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Dedham, Town of

CID 230279

Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 4/18/1975

Participating=No **LURC:** No

Ordinance Date:

Total No. NFIP Policies=ND **No. Claims Since 1978=** ND

All LOMCs: 8

Alfred Jellison

207-843-6217

Selectmen

Town of Dedham

2073 Main Rd. Ste A

Dedham ME 04429

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Eastbrook, Town of

CID 230281 Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 4/18/1975

Participating=Sus **LURC:** No

Ordinance Date:

Total No. NFIP Policies=ND **No. Claims Since 1978=** ND

All LOMCs: 2

Charles Yeo 207-565-3307

Selectmen

Town of Eastbrook

Rte 200, RR 1, Box 458-B

Eastbrook ME 04634

Jonathan Pierce, CEO 207-584-2035

133 Mill Lane

Waltham ME 04605

Best Available Data: Molasses Pond: approx. Bfe 211.5' based on SCS figures ('89) calculated during engineering of dam

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Ellsworth, City of

CID 230066

Community Profile

Map Type: No Floodways

Current FIRM/FIS Map Date: 11/4/1988

Participating=Yes **LURC:** No

Ordinance Date: 1/25/1993

Total No. NFIP Policies=17 **No. Claims Since 1978=** 1

All LOMCs: 15

Stephen Gunty 207-667-2563
City Manager
City of Ellsworth
PO Box 586
Ellsworth ME 04605

Dwight Tilton, CEO 207-667-2563
PO Box 5308
Ellsworth ME 04605

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Ellsworth, City of

CID 230066

Community Profile

Map Type: No Floodways

Current FIRM/FIS Map Date: 11/4/1988

Participating=Yes **LURC:** No

Ordinance Date: 1/25/1993

Total No. NFIP Policies=17 **No. Claims Since 1978=** 1

All LOMCs: 15

Stephen Gunty 207-667-2563
City Manager
City of Ellsworth
PO Box 586
Ellsworth ME 04605

Dwight Tilton, CEO 207-667-2563
PO Box 5308
Ellsworth ME 04605

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Gouldsboro, Town of

CID 230283 Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 6/4/1987

Participating=Yes **LURC:** No

Ordinance Date: 6/22/1999

Total No. NFIP Policies=22 **No. Claims Since 1978=** 1

All LOMCs: 29

Bradford Vassey 207-963-5589
Town Manager
Town of Gouldsboro
PO Box 68
Prospect Harbor ME 04669

John Fuhrman, CEO 207-963-5589
PO Box 525
Winter Harbor ME 04693

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Gouldsboro, Town of

CID 230283

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 6/4/1987

Participating=Yes **LURC:** No

Ordinance Date: 6/22/1999

Total No. NFIP Policies=22 **No. Claims Since 1978=** 1

All LOMCs: 29

Bradford Vassey

207-963-5589

Town Manager

Town of Gouldsboro

PO Box 68

Prospect Harbor ME 04669

John Fuhrman, CEO

207-963-5589

PO Box 525

Winter Harbor ME 04693

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Hancock, Town of

CID 230284 Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 6/3/1991

Participating=Yes **LURC:** No

Ordinance Date: 5/14/2001

Total No. NFIP Policies=16 **No. Claims Since 1978=** 2

All LOMCs: 17

Stacey Clement 207-422-3393
Selectmen
Town of Hancock
PO Box 68
Hancock ME 04640

John Larson, CEO 207-422-3393
197 Seal Point Rd.
Lamoine ME 04605

Best Available Data:

Mapping Status:

Mapping Needs: Surveyor on Plng Bd has complaints about accuracy of maps.

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Mariaville, Town of

CID 230286 Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 3/14/1975

Participating=Yes LURC: No

Ordinance Date: 4/7/1997

Total No. NFIP Policies=10 No. Claims Since 1978= 0

All LOMCs: 13

Mark Johnson 207-537-2107

Admin Asst

Town of Mariaville

1686 Mariaville Rd

Mariaville ME 04605

John Larson, CEO

Lamoine ME 04605

Best Available Data: Graham Lake: Bfe 106.8' NGVD per Ellsworth FIS 11/4/88

Mapping Status:

Mapping Needs: 12/10/04 CEO, John Larson contends there are hundreds of camps around Graham Lake and no FPM permits. He is trying to get town up to speed. Planning board is permitting authority.

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Orland, Town of

CID 230288

Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 2/4/1987

Participating=Yes **LURC:** No

Ordinance Date: 4/26/2005

Total No. NFIP Policies=5 **No. Claims Since 1978=** 2

All LOMCs: 9

S. Wayne Ames 207-469-3186
Selectmen
Town of Orland
PO Box 67
Orland ME 04472

Judith Jenkins, CEO 207-374-5192
PO Box 144
Penobscot ME 04476

Best Available Data:Alamoosook Lake: Bfe 22' Orland LOMA 1/12/01. Toddy
Pond: Bfe 165' per Penobscot FIRM 7/16/91

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Sorrento, Town of

CID 230292 Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 9/4/1985

Participating=Yes LURC: No

Ordinance Date: 4/20/2004

Total No. NFIP Policies=3 No. Claims Since 1978= 0

All LOMCs: 6

Louis Sutherland Sr. 207-422-6889
Selectmen
Town of Sorrento
79 Pomola Ave.
Sorrento ME 04677

John Fuhrman, CEO 207-963-5589
PO Box 525
Winter Harbor ME 04693

Best Available Data:

Mapping Status:

Mapping Needs: Town requested updated maps with improved floodplain delineations and scale in letter April '04.

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Southwest Harbor, Town of

CID 230293

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 6/3/1991

Participating=Yes **LURC:** No

Ordinance Date: 11/1/2000

Total No. NFIP Policies=27 **No. Claims Since 1978=** 8

All LOMCs: 3

Kenneth Minier

207-244-5404

Town Manager

Town of Southwest Harbor

PO Box 745

Southwest ME 04679

Lewis Hutchins, CEO

207-374-5194

PO Box 553

Blue Hill ME 04617

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Southwest Harbor, Town of

CID 230293

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 6/3/1991

Participating=Yes **LURC:** No

Ordinance Date: 11/1/2000

Total No. NFIP Policies=27 **No. Claims Since 1978=** 8

All LOMCs: 3

Kenneth Minier

207-244-5404

Town Manager

Town of Southwest Harbor

PO Box 745

Southwest ME 04679

Stephen Wilson, CEO

207-244-5404

PO Box 745

Southwest ME 04679

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Sullivan, Town of

CID 230295 Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 9/4/1985

Participating=Yes LURC: No

Ordinance Date: 6/27/1994

Total No. NFIP Policies=3 No. Claims Since 1978= 0

All LOMCs: 4

Helen Gordon 207-422-6282
Selectmen
Town of Sullivan
1888 US Hwy 1
Sullivan ME 04664

John Fuhrman, CEO 207-963-5589
PO Box 525
Winter Harbor ME 04693

Best Available Data: Sullivan Harbor, Egypt Bay, Taunton Bay: Bfe 11'
(Hancock FIRM 6/91)

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

T08 SD

CID 230458

Community Profile

Map Type: Unnumbered A-zone

Current FIRM/FIS Map Date: 10/1/1986

Participating=Yes **LURC:** No

Ordinance Date:

Total No. NFIP Policies=3 **No. Claims Since 1978=** 0

All LOMCs: 1

Fred **Todd**
Manager
Land Use Regulatory Commission
SHS 22
Augusta ME 04333

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Tremont, Town of

CID 230298

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 8/2/1990

Participating=Yes **LURC:** No

Ordinance Date: 5/11/1999

Total No. NFIP Policies=18 **No. Claims Since 1978=** 1

All LOMCs: 4

Millard Billings 207-244-7204
Town Manager
Town of Tremont
PO Box 65
Tremont ME 04612

Milard Billings, CEO 207-565-3631
160 West Franklin Rd.
Franklin ME 04634

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Trenton, Town of

CID 230299

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 8/2/1990

Participating=Yes **LURC:** No

Ordinance Date: 5/16/2000

Total No. NFIP Policies=10 **No. Claims Since 1978=** 1

All LOMCs: 18

Janet Muise 207-667-7207

Town Clerk

Town of Trenton

59 Oak Point Rd.

Trenton ME 04605

Angela Chamberlain, CEO 207-288-3523

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

COMMUNITY CONTACTS AND BEST AVAILABLE DATA: HANCOCK COUNTY

Trenton, Town of

CID 230299

Community Profile

Map Type: Coastal

Current FIRM/FIS Map Date: 8/2/1990

Participating=Yes **LURC:** No

Ordinance Date: 5/16/2000

Total No. NFIP Policies=10 **No. Claims Since 1978=** 1

All LOMCs: 18

Janet Muise 207-667-7207

Town Clerk

Town of Trenton

59 Oak Point Rd.

Trenton ME 04605

Angela Chamberlain, CEO 207-288-3523

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Appendix B: Community Scoping Interview Data: Hancock County

SCOPING INTERVIEW DATA FOR: Bar Harbor

CID: 230064 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday may

Community Representative Interviewed

Angela Chamberlain
CEO

Email: ceo@barharbormaine.gov **Tel:** (207) 288-3329 **Fax:** (207) 288-3032

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. P15, A zone near Oak Hill Road

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

Yes. P5, several spots along Crooked Rd flood but are not in A zone; medium priority

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. 2005, B&W.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

Maybe.

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

Yes. Contact Steven Weed, assessor, at assessor@barharbormaine.gov.

Notes

No comments on MNUSS records.

SCOPING INTERVIEW DATA FOR: Blue Hill

CID: 230274 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 3rd weekend March

Community Representative Interviewed

Judith Jenkins
CEO

Email: judybluehill@yahoo.com **Tel:** (207) 374-5192 **Fax:** (207) 374-9935

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Yes. Contact Mike Asthey, road commissioner, or Jim Schatz, selectman.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

No comments on maps. No MNUSS records.

SCOPING INTERVIEW DATA FOR: Brooklin

CID: 230275 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: April

Community Representative Interviewed

Judith Jenkins
CEO

Email: judybluehill@yahoo.com **Tel:** (207) 374-5192 **Fax:** (207) 374-9935

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Maybe. Contact Bob Tapley, selectman.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

For high water mark info, contact Gerry Gray, selectman, 207-359-8394.

No markings on maps.

SCOPING INTERVIEW DATA FOR: Brooksville

CID: 230276 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Lewis Hutchins
CEO

Email: **Tel:** (207) 460-9164 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Did not indicate where.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

No comments on maps or MNUSS records.

SCOPING INTERVIEW DATA FOR: Bucksport

CID: 230065 **Council Govt:** **Annual Town Meeting Date:**
Town Govt:

Community Representative Interviewed

Jeffrey Hammond
CEO

Email: ceo@bucksport.biz **Tel:** (207) 469-7368 **Fax:** (207) 469-7369

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. P15B, A along Rt 15.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes, unknown type and date.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

Yes. 100-yr flood marks done by Soil Conservation Service.

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Highest priority: P15B parking lot area - remove from A zone.

SCOPING INTERVIEW DATA FOR: Cranberry Isles

CID: 230278 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: March

Community Representative Interviewed

Kimberly Keene
Ceo

Email: lckeene@peoplepc.com **Tel:** (207) 288-4024 **Fax:** (207) 288-4024

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

No comments on MNUSS records.

High priority is VE zones on Great and Little Cranberry Isles, but does not

SCOPING INTERVIEW DATA FOR: Deer Isle

CID: 230280 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Hubert Billings
CEO

Email: **Tel:** (207) 348-6677 **Fax:** (207) 348-2324

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Many areas do not flood. East and west shores, southeast corner of Little Deer Isle. LOMCs and MNUSS records should reflect this.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. Old, 1970s and 1980s. USDA may acquire new photos every 10 years. NOTE: followup call to Ray Boyer, USDA NRCS, who says they do NOT acquire aerial

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Works with Stonington on flood issues. Would like copies of LOMCs. Believes many outlying islands (like Shabby I) are part of LURC, not town.

Highest priority is restudy of coastal elevations. No markings on maps.

SCOPING INTERVIEW DATA FOR: Ellsworth

CID: 230066 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Dwight Tilton
CEO

Email: **Tel:** (207) 667-2563 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Leonard Lake, highest priority, new dam 20-30 years ago. Branch Lake, city has repaired dam.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

Yes. Expecting topo data from planned sewer project within the next 12 months.

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

Yes. Presumably Dwight Tilton.

Notes

SCOPING INTERVIEW DATA FOR: Franklin

CID: 230282 **Council Govt:** **Annual Town Meeting Date:**
Town Govt:

Community Representative Interviewed

John Furman
Ceo

Email: **Tel:** (207) 565-3663 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Map does not show accurately how far inland flood zone is.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Some along coastal areas.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Highest priority - improve coastal topography to show shoreline elevations accurately.

SCOPING INTERVIEW DATA FOR: Hancock

CID: 230284 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 2nd Monday May

Community Representative Interviewed

Les Stratton, Rod Franzius
Selectman, Planning board

Email: **Tel:** (207) 422-3393 **Fax:**

Floodplain Management Community Contact (if different from above)

Ruth Franzius, Planning board; Antonio Blasi, Planning board; Liz Ducharme, Ordinance review. Also can contact Stacey Clement at town office.

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. P5, near Carrying Place inlet.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Yes. Kilkenney Stream and Hancock-Sullivan - new bridges.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Coastal development has increased steadily during the last 20 years.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

P10 - Several disagreements about extent of VE zone (as opposed to AE zone) - need restudy.

Expecting to have more detailed info from a surveyor (Ed Pare) which may be

SCOPING INTERVIEW DATA FOR: Lamoine

CID: 230285 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: March

Community Representative Interviewed

Fred Stocking, Bob Alvary
Conservation comm, Planning board

Email: fredstocking@adelphia.net **Tel:** (207) 667-6009 **Fax:** (207) 667-6407

Floodplain Management Community Contact (if different from above)

Gordon Donaldson, planning board; Stu Marckoon, admin asst

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Southern shore listed as velocity-driven hazard; FEMA Boston said MDI wasn't on their maps. Lamoine is in the lee of a large island, and there is little velocity-driven hazard.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. 1973 B&W, maybe 1:800 scale

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

Yes. GIS based data around 1996.

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

Yes. Gerber GW report, 1983, partially updated by Mitchell Center at Umaine-Orono. Some GW-level monitoring in gravel pits.

Do you have dedicated GIS capabilities (if so, provide contact information)?

Yes. Some - Stu Marckoon, admin asst and College of the Atlantic.

Notes

All VE zones are either wrong or greatly exaggerated.

SCOPING INTERVIEW DATA FOR: Mariaville

CID: 230286 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: Last Monday March

Community Representative Interviewed

Mark Johnson
Admin Asst

Email: townofmariaville@rivah.net **Tel:** (207) 537-2107 **Fax:** (207) 537-2106

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Yes. P2, new culvert on River Rd (A zone), several new culverts on private roads along Graham Lake (A zone)

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Along shoreline of W Branch Union River and Graham Lake.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Priority 1 - improved delineation of flood zones along shorelines of Graham Lake and W Br Union River. (Note that shoreline of Graham Lake has changed considerably from fluctuations in WLs, erosion.)

SCOPING INTERVIEW DATA FOR: Mount Desert

CID: 230287 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Kimberly Keene
CEO

Email: ceo@mtdesert.org **Tel:** (207) 276-5731 **Fax:** (207) 276-3232

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. P15, area near Lower and Upper Dunbar not subject to flooding (low priority).

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

Yes. P10, areas around Long Pond and Echo Lake (Highest priority). P15, excessive elevations in VE zone (medium priority).

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. 1980s, B&W; budget will allow for new photography in the future.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

Yes. Through College of the Atlantic GIS lab.

Notes

Mt Desert works with Bar Harbor on flood issues. MNUSS entries agree with comments about VE-zone elevations being inaccurate.

SCOPING INTERVIEW DATA FOR: Orland

CID: 230288 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: Last Monday march

Community Representative Interviewed

Judith Jenkins
CEO

Email: judybluehill@yahoo.com **Tel:** (207) 374-5192 **Fax:** (207) 374-9935

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

Yes. Rt 175 & Fish Pt Rd; also dam at Alamoosook Lake regulates water level of entire lake; the Bucksport Mill has charge of this.

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Maybe. Contact Wayne Ames, Selectman, at 207-469-3186

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

1st priority - poor mapping of Orland River (zone A) near downtown (P3).
Priority 2 - include dam on Alamoosook Lake (P4)

No comments on MNUSS records.

SCOPING INTERVIEW DATA FOR: Penobscot

CID: 230290 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Judith Jenkins
CEO

Email: judybluehill@yahoo.com **Tel:** (207) 374-5192 **Fax:** (207) 374-9935

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

SCOPING INTERVIEW DATA FOR: Sorrento

CID: 230292 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: September

Community Representative Interviewed

John Fuhrman
CEO

Email: **Tel:** (207) 422-6884 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No. But maps do not show accurately how far floodplain comes inland, nor elevations.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Coastal development pressure.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Everything is zone A. Need flood elevations and topography.

SCOPING INTERVIEW DATA FOR: Southwest Harbor

CID: 230293 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday May

Community Representative Interviewed

Lewis Hutchins
CEO

Email: **Tel:** (207) 244-7915 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

No comments on anything.

SCOPING INTERVIEW DATA FOR: Stonington

CID: 230294 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed

Judith Jenkins
CEO

Email: judybluehill@yahoo.com **Tel:** (207) 374-5192 **Fax:** (207) 374-9935

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

Maybe. Contact town manager at 207-367-2351

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. The downtown area from Atlantic Ave to Ocean St is constantly under construction.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. Contact town manager.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

Maybe. Contact town manager.

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

Maybe. Contact Roger Stone, director of water company, 207-367-2351

Do you have dedicated GIS capabilities (if so, provide contact information)?

Yes. Managed by Rick Avery, town manager.

Notes

Contact town manager about whether high water marks are kept.

No comments on MNUSS records

SCOPING INTERVIEW DATA FOR: Sullivan

CID: 230295 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: Last Monday June

Community Representative Interviewed

John Fuhrman
CEO

Email: **Tel:** (207) 422-6282 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Coastal areas that are above shoreline by > 10 ft. Topographic mapping issue. Need elevations and good topographic control.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Coastal development pressure.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

A Zones difficult to interpret due to lack of topographic control along coastlines (highest priority)

SCOPING INTERVIEW DATA FOR: Trenton

CID: 230299 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st weekend April

Community Representative Interviewed

Angela Chamberlain
CEO

Email: tymax@adelphia.net **Tel:** (207) 288-3523 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. P10 - areas have been removed from floodplain.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

Yes. P5 - flooded areas not mapped, but not high priority.

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

Yes. B&W, date unknown

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

SCOPING INTERVIEW DATA FOR: Winter Harbor

CID: 230302 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: June

Community Representative Interviewed

John Fuhrman
CEO

Email: **Tel:** (207) 963-5589 **Fax:**

Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?

Yes. Coastal areas with cliffs or rock rises above shoreline

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?

No

Note any significant changes in hydraulic structures (bridges, culverts, dams)

No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?

Yes. Coastal development pressures.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?

No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?

No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?

No

Do you have dedicated GIS capabilities (if so, provide contact information)?

No

Notes

Highest priority - improve coastal topographic controls

Appendix C: Existing MNUSS Data Entries: Hancock County

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BAR HARBOR, TOWN OF

CID 230064 MNUSS Summary

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640005B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640005B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

BAR HARBOR, TOWN OF

CID 230064 MNUSS Summary

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640010B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640010B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BAR HARBOR, TOWN OF

CID 230064 MNUSS Summary

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640010B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640020B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BAR HARBOR, TOWN OF

CID 230064 MNUSS Summary

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640020B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640020B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lowe

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BAR HARBOR, TOWN OF

CID 230064 MNUSS Summary

MNUSS NeedID 100000000010126

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2300640005B

Need Desc: Changes to coastal elevations

Length: 11.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 44 feet, while stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BROOKSVILLE, TOWN OF

CID 230276 MNUSS Summary

MNUSS NeedID 100000000010146

Date of Need: 4/26/1999

Penobscot Bay

Panel: 2302760015B

Need Desc: Changes to coastal elevations

Length: 4.16 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high ranging from 15 to 35 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs be to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010146

Date of Need: 4/26/1999

Penobscot Bay

Panel: 2302760015B

Need Desc: Changes to coastal elevations

Length: 4.16 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high ranging from 15 to 35 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs be to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

BROOKSVILLE, TOWN OF

CID 230276 MNUSS Summary

MNUSS NeedID 100000000010146

Date of Need: 4/26/1999

Penobscot Bay

Panel: 2302760015B

Need Desc: Changes to coastal elevations

Length: 4.16 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high ranging from 15 to 35 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs be to be computed using current methodology which will

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
CRANBERRY ISLES, TOWN OF

CID 230278 MNUSS Summary

MNUSS NeedID 100000000010233

Date of Need: 11/6/1997

Panel: 2302780005C

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THE TOWN IS UNHAPPY WITH ACCURACY OF THE BASE MAP BUT HAS NOT YET

MFMP Comments: DFIRM

MNUSS NeedID 100000000010233

Date of Need: 11/6/1997

Panel: 2302780005C

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THE TOWN IS UNHAPPY WITH ACCURACY OF THE BASE MAP BUT HAS NOT YET

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
CRANBERRY ISLES, TOWN OF

CID 230278 MNUSS Summary

MNUSS NeedID 100000000010233

Date of Need: 11/6/1997

Panel: 2302780005C

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THE TOWN IS UNHAPPY WITH ACCURACY OF THE BASE MAP BUT HAS NOT YET

MFMP Comments: DFIRM

MNUSS NeedID 100000000010234

Date of Need: 11/6/1997

Panel: 2302780005C

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

CRANBERRY ISLES, TOWN OF

CID 230278 MNUSS Summary

MNUSS NeedID 100000000010128

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302780005C

Need Desc: Changes to coastal elevations

Length: 6.6 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, from 11 to 30 feet, while the stillwater elevation is 10.8 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010128

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302780005C

Need Desc: Changes to coastal elevations

Length: 6.6 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, from 11 to 30 feet, while the stillwater elevation is 10.8 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

CRANBERRY ISLES, TOWN OF

CID 230278 MNUSS Summary

MNUSS NeedID 100000000010128

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302780005C

Need Desc: Changes to coastal elevations

Length: 6.6 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, from 11 to 30 feet, while the stillwater elevation is 10.8 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFE

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
DEER ISLE, TOWN OF

CID 230280 MNUSS Summary

MNUSS NeedID 100000000010232

Date of Need: 11/6/1997

Panel: 2302800015B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010232

Date of Need: 11/6/1997

Panel: 2302800025B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

DEER ISLE, TOWN OF

CID 230280 MNUSS Summary

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800020B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lower

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800025B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

DEER ISLE, TOWN OF

CID 230280 MNUSS Summary

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800025B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lo

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800020B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

DEER ISLE, TOWN OF

CID 230280 MNUSS Summary

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800020B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010153

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302800025B

Need Desc: Changes to coastal elevations

Length: 19.1 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 31 feet, while the stillwater elevation is 11.1 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current Methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
ELLSWORTH, CITY OF

CID 230066 MNUSS Summary

MNUSS NeedID 100000000010346

Date of Need: 3/4/1998

Panel: 2300660005B

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010347

Date of Need: 3/4/1998

Panel: 2300660005B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
GOULDSBORO, TOWN OF

CID 230283 MNUSS Summary

MNUSS NeedID 100000000010307

Date of Need: 12/17/1997

Panel: 2302830010B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010307

Date of Need: 12/17/1997

Panel: 2302830015B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
GOULDSBORO, TOWN OF

CID 230283 MNUSS Summary

MNUSS NeedID 100000000010307

Date of Need: 12/17/1997

Panel: 2302830020B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010308

Date of Need: 12/17/1997

Atlantic Ocean

Panel: 2302830015B

Need Desc: Changes to coastal elevations

Length: 20.1 mi

Anticipated BFE Change: Decreased By Between 1 and 5 feet

Location of Floodplain:

Need Notes:

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

GOULDSBORO, TOWN OF

CID 230283 MNUSS Summary

MNUSS NeedID 10000000010308

Date of Need: 12/17/1997

Atlantic Ocean

Panel: 2302830025B

Need Desc: Changes to coastal elevations

Length: 20.1 mi

Anticipated BFE Change: Decreased By Between 1 and 5 feet

Location of Floodplain:

Need Notes:

MFMP Comments: Requires restudy

MNUSS NeedID 10000000025851

Date of Need: 8/28/2001

Panel: 2302840015A

Need Desc: Add an ERM

Length: 0 mi

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: Description of RM 10 is in error. "330 yards" should be "330 feet".

MFMP Comments: Not valid

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

MARIAVILLE, TOWN OF

CID 230286 MNUSS Summary

MNUSS NeedID 100000000010363

Date of Need: 4/8/1998

Panel:

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: WE RECEIVED AN E-MAIL ONLY. UPDATE THIS 11 X 17 TO Z-FOLD
FORMAT

MFMP Comments: DFIRM

MNUSS NeedID 100000000010364

Date of Need: 4/8/1998

ALL APPROXIMATE ZONE A AREAS

Panel:

Length: 27.27 mi

Need Desc: Changes to floodplain width

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: WE RECEIVED AN E-MAIL ONLY UPDATE THIS 11 X 17 TO Z-FOLD
FORMAT

MFMP Comments: FIS required

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

MOUNT DESERT, TOWN OF

CID 230287 MNUSS Summary

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870005A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870005A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

MOUNT DESERT, TOWN OF

CID 230287 MNUSS Summary

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870005A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870015A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

MOUNT DESERT, TOWN OF

CID 230287 MNUSS Summary

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870015A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010131

Date of Need: 4/26/1999

Atlantic Ocean

Panel: 2302870015A

Need Desc: Changes to coastal elevations

Length: 9.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 11 to 36 feet, while the stillwater elevation is 10.7 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

ORLAND, TOWN OF

CID 230288 MNUSS Summary

MNUSS NeedID 100000000010205

Date of Need: 10/6/1997

ALAMOOSOOK LAKE

Panel: 230288 A

Need Desc: Changes to hydrologic conditions

Length: 2.1 mi

Anticipated BFE Change: Increased By Between 1 and 5 feet

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: FIS required

MNUSS NeedID 100000000010205

Date of Need: 10/6/1997

ALAMOOSOOK LAKE

Panel: 230288 A

Need Desc: Changes to hydrologic conditions

Length: 2.1 mi

Anticipated BFE Change: Increased By Between 1 and 5 feet

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: FIS required

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
ORLAND, TOWN OF

CID 230288 MNUSS Summary

MNUSS NeedID 100000000010204

Date of Need: 10/6/1997

Panel: 230288 A

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: DFIRM

MNUSS NeedID 100000000010204

Date of Need: 10/6/1997

Panel: 230288 A

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

ORLAND, TOWN OF

CID 230288 MNUSS Summary

MNUSS NeedID 100000000010204

Date of Need: 10/6/1997

Panel: 230288 A

Length: 0 mi

Need Desc: Add streets to panel

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: DFIRM

MNUSS NeedID 100000000010205

Date of Need: 10/6/1997

ALAMOOSOOK LAKE

Panel: 230288 A

Length: 2.1 mi

Need Desc: Changes to hydrologic conditions

Anticipated BFE Change: Increased By Between 1 and 5 feet

Location of Floodplain:

Need Notes: THIS IS AN 11 X 17 AND WILL HAVE TO BE REVISED TO A Z-FOLD
FORMAT

MFMP Comments: FIS required

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
SOUTHWEST HARBOR, TOWN OF

CID 230293 MNUSS Summary

MNUSS NeedID 100000000010218

Date of Need: 11/6/1997

Panel: 2302930015B

Length: 0 mi

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010113

Date of Need: 4/27/1999

Atlantic Ocean

Panel: 2302930015B

Need Desc: Changes to coastal elevations

Length: 1.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 16 feet, while the stillwater elevation is 10.6 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will l

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
SOUTHWEST HARBOR, TOWN OF

CID 230293 MNUSS Summary

MNUSS NeedID 100000000010113

Date of Need: 4/27/1999

Atlantic Ocean

Panel: 2302930015B

Need Desc: Changes to coastal elevations

Length: 1.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 16 feet, while the stillwater elevation is 10.6 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010113

Date of Need: 4/27/1999

Atlantic Ocean

Panel: 2302930015B

Need Desc: Changes to coastal elevations

Length: 1.5 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 11 to 16 feet, while the stillwater elevation is 10.6 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

STONINGTON, TOWN OF

CID 230294 MNUSS Summary

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940005C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will low

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940005C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

STONINGTON, TOWN OF

CID 230294 MNUSS Summary

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940010C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940010C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

STONINGTON, TOWN OF

CID 230294 MNUSS Summary

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940005C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010108

Date of Need: 12/9/1996

Atlantic Ocean

Panel: 2302940010C

Need Desc: Changes to coastal elevations

Length: 10.7 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFEs are too high, ranging from 10 to 18 feet, while the stillwater elevation is 10.4 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will low

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
STONINGTON, TOWN OF

MNUSS NeedID 100000000010217

Need Desc: Add LOMCs (per panel)

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

CID 230294 MNUSS Summary

Date of Need: 11/6/1997

Panel: 2302940010C

Length: 0 mi

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

SWANS ISLAND, TOWN OF

CID 230297 MNUSS Summary

MNUSS NeedID 100000000010248

Date of Need: 11/17/1997

Coast

Panel: 230297 A

Need Desc: Changes to hydrologic conditions

Length: 2.9 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: COMMUNITY WANTS RESTUDY TO UTILIZE NEW/CURRENT
METHODOLOGIES. CURRENT MAP IS AN 11 X 17 AND NEEDS TO
UPDATED TO THE Z-FOLD FORMAT.

MFMP Comments: FIS required

MNUSS NeedID 100000000010248

Date of Need: 11/17/1997

Coast

Panel: 230297 A

Need Desc: Changes to hydrologic conditions

Length: 2.9 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: COMMUNITY WANTS RESTUDY TO UTILIZE NEW/CURRENT
METHODOLOGIES. CURRENT MAP IS AN 11 X 17 AND NEEDS TO
UPDATED TO THE Z-FOLD FORMAT.

MFMP Comments: FIS required

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

TREMONT, TOWN OF

MNUSS NeedID 100000000025852

CID 230298 MNUSS Summary

Date of Need: 8/28/2001

Panel: 2302980020B

Length: 0 mi

Need Desc: Add an ERM

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: RM 6 added on Great Gott Island: at SW end of spit of land (known as Green Head), on top of high point of a granite rock outcrop, directly over a drill hole marked with a chiseled X. 14.28 NGVD

MFMP Comments: Not valid

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY
WINTER HARBOR, TOWN OF

CID 230302 MNUSS Summary

MNUSS NeedID 100000000010260

Date of Need: 11/17/1997

Panel: 2303020010A

Length: 0 mi

Need Desc: Align map panels

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010260

Date of Need: 11/17/1997

Panel: 2303020005A

Length: 0 mi

Need Desc: Align map panels

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

WINTER HARBOR, TOWN OF

CID 230302 MNUSS Summary

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020005A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will l

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020010A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

WINTER HARBOR, TOWN OF

CID 230302 MNUSS Summary

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020010A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020005A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

EXISTING MNUSS ENTRIES FOR HANCOCK COUNTY

WINTER HARBOR, TOWN OF

CID 230302 MNUSS Summary

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020005A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires restudy

MNUSS NeedID 100000000010123

Date of Need: 4/28/1999

Atlantic Ocean

Panel: 2303020010A

Need Desc: Changes to coastal elevations

Length: 17 mi

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 13 to 24 feet, while the stillwater elevation is 10.9 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will l

MFMP Comments: Requires restudy

Appendix D: Attachments



STATE OF MAINE
EXECUTIVE DEPARTMENT
MAINE STATE PLANNING OFFICE
38 STATE HOUSE STATION
AUGUSTA, ME 04333



FEMA

November 6, 2006

Dear

Subject: Important Meeting on Updating Your Community's Flood Maps

Flooding has caused more than \$150,000,000 in damages to Maine's cities and towns during the past twenty years. Coastal and riverine floods impact the lives of our citizens almost annually. Recently completed County Hazard Mitigation Plans identify flooding as the foremost natural hazard in the majority of our sixteen counties.

When the National Flood Insurance Program (NFIP) was established in 1968 it provided for a three part approach to reducing damage from flooding. The first part was the establishment of a flood insurance program overseen by the Flood Insurance Administration (FIA). The second part was the identification and mapping of the flood hazard. The third part was a requirement for communities that wanted to participate in the NFIP to adopt and enforce floodplain management regulations designed to control development in flood prone areas. Of the three parts of the NFIP the second component, mapping the hazard, is the glue that holds the program together. Communities cannot control development if they do not know what areas of their municipality are threatened by flooding. Flood insurance cannot be provided equitably unless insurance agents are able to determine the level of risk for a specific property.

Nationwide the current Flood Insurance Rate Maps (FIRM) are aging and some states, such as Maine, have maps that are on average more than twenty years old. Congress realized that this was a problem and in 2004 provided funding to FEMA to begin a comprehensive updating of the maps. This updating effort is called "Flood Map Modernization", Map Mod for short.

Maine has actively participated in Map Mod since its inception. To date we have remapping projects underway in York, Cumberland and Oxford counties and have met with community officials to discuss their flood mapping needs in Kennebec and Somerset counties. During this fall and winter we will be gathering information on mapping issues and concerns in Penobscot, Lincoln and Hancock counties. These meetings are designed to give municipal officials a chance to share with us any problems they have with their FIRMs and are called "Scoping Meetings" by FEMA.

Thursday, December 14th from 12:30 PM to 3:00 PM we will meet with officials from Hancock County communities at the Ellsworth Public Library.

During the Scoping Meeting we will meet with communities individually and review their current FIRM and discuss possible changes to the map to improve floodplain management at the local level.

We have attached two documents to this letter. One document is a **FAX-Back** form to allow you to sign up for a time during the day that is most convenient for you. We ask that you reply to us by **November 15th** so that we can schedule staff to meet with you. Our goal is to take no more than thirty minutes of your time to go over the maps, but we will use as much time as is necessary to get the best possible information about your community. The other document is a brief overview of the Map Mod process which can also be seen at our web-site www.maine.gov/spo/flood.

In preparation for the Scoping Meeting, we would like your community to identify flood mapping issues to be considered for study or review. It will be helpful to have the flooding issues prioritized and for you to be able to locate the areas of concern on the flood maps. In addition, it will also be beneficial to bring a brief narrative describing the reasons you would like to request that changes be made to the maps. This information will help us help you at the meeting and assist us in finalizing the scope of work necessary to update the maps. If your community is unable to attend the Scoping Meeting, this information may also be sent to the lead scoping agency working in collaboration with the Maine Floodplain Management Program and FEMA: USGS, 196 Whitten Road, Augusta, ME 04330.

If you have any questions regarding the Scoping Meeting or need additional information please feel free to contact Tom Marcotte at the State Planning Office (207-287-8051), Rob Dudley at USGS (207-622-8201 ext. 115) or Chuck Schalk at USGS (207-622-8201 ext. 111).

Thank you for your assistance with Map Mod.

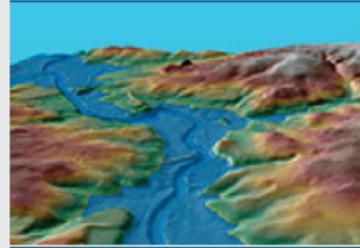
Tom Marcotte, CFM
Maine Floodplain Management Program

Kerry Casserly
FEMA Region I

Rob Dudley, P.E.
USGS Maine Water Science Center

Multi-Hazard Flood Map Modernization

**A POWERFUL TOOL FOR MULTHAZARD
RISK MANAGEMENT**



WHY MODERNIZE?

Multi-Hazard Flood Map Modernization (Map Mod) is based on a solid foundation. The National Flood Insurance Program (NFIP) is the cornerstone of the Nation's strategy for preparing communities for flood disasters. Up-to-date flood hazard maps enable an actuarially sound flood insurance system, enable wise floodplain management, and increase the Nation's flood hazard awareness. The NFIP serves 4.5 million policyholders by providing \$650 billion in coverage to structures and their contents.

Map Mod builds upon recommendations made by the Technical Mapping Advisory Council in 2000. The President's budget included an investment to bring flood hazard maps up to date. The 5-year Multi-Year Flood Hazard Identification Plan (MHIP) provides a roadmap that will enable easier regulatory compliance for government and businesses.

WHAT'S DIFFERENT?

Map Mod brings *state-of-the-art technology*. New engineering practices and tools will streamline studies and improve results. Capturing interim data throughout the process will improve the data quality and provide access to mapping products earlier in the mapping lifecycle. Spatial visualization techniques will provide easy viewing and analysis of the information. Data quality will also be enhanced through refined standards

HOW WILL IT HELP?

Map Mod enhances the ability to manage risks and other issues locally. Reliable flood data reflecting current conditions enables citizens to more reliably know their flood risk, and to purchase flood insurance based on actual risk. It also provides communities with a more comprehensive approach to disaster mitigation planning, economic development, and emergency response. Communities will be enabled to manage flood risks, water resources, land use, and other responsibilities more effectively. Communities will be empowered to update maps and data as risks change. Integration of multi-hazard data will provide a broader view of the total risk. Goals and outcomes will be aligned across mapping partners.

WHO WILL MAKE IT HAPPEN?

Map Mod is a *collaborative process* and a new way of doing business for government officials, cutting across all layers of government. Officials and other stakeholders will be active in mapping operations (e.g., collecting, updating, and adopting data). Leveraging of partnerships will allow States and communities to choose their level of involvement with Map Mod. The National Service Provider will improve national consistency, and bring innovative know-how to the program.

WHO BENEFITS?

Map Mod touches a broad stakeholder community who will see different benefits.

- Community planners and local officials will gain a greater understanding of the flood hazards and risks that affect their community
- Builders and developers will have detailed information for making well-informed decisions on where to build and how they can affect flood zones
- Insurance agents and lending institutions will clearly understand map changes and what they need to do
- Home and business owners will be better informed about their current flood risks

For more information, please visit www.fema.gov/fhmy/mm_main.shtm or hazards.fema.gov



NOVEMBER 2004

**Hancock County Community Interview Form
FEMA Map Modernization Program
December 14, 2006**

Community: _____ Effective FIS/FIRM Date: _____

CID#: 230 ____ GOVT: Town OR Council

If Town Government, Date of Annual Town Meeting: _____

Community Representative(s) attending meeting:

Name(s): _____

Title(s): _____

Tel: _____ Email(s): _____

Fax: _____

Floodplain Mgt Community Contact (and contact info if different from above): _____

Known problems with flood maps for your community (note FIRM panel numbers)

(Note: Most base-map issues such as street names, roads, corporate boundaries, and spatial issues will be fixed when new digital FIRMS are produced) PLEASE PROVIDE ADDITIONAL INFORMATION FOR ANY YES ANSWERS BELOW and HIGHLIGHT areas of concern on the MAPS provided.

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain? Yes No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain or not mapped at all?

Yes No

Have any changes in hydraulic structures (bridges, culverts, dams) taken place that would change the maps since the effective maps were issued?

Yes No

Do you currently have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale? Yes No

Hancock County Community Interview Form

Community resources:

Yes No

Do you have aerial photography or plans for any (flight date, scale, color/black & white)?

Yes No

Do you have topographic data or plans for collecting any (digital terrain, contour maps)?

Yes No

Do you have any other data like special hydrologic/hydraulic studies (or plans for studies)?

Yes No

Do you have dedicated GIS capabilities? Yes No (Provide GIS contact info if different from front page)

Do you know if someone in your community keep a record of high-water marks? Who? (fire/police/public works?)

Yes No

Does your community work with neighboring communities to manage flood sources along town boundaries?

Yes No List communities here:

Interviewer: Review MNUSS entries and BAD with town representative

Done and all OK, or

Done and see notes

Interviewer: Has the town representative indicated the flood map priorities on the provided map? Yes No

NOTES: _____

EASTERN SURVEYING COMPANY, INC.

12 McInnis Road
Hancock, Maine 04640

Louis Edward Paré

Maine L.P.L.S. # 1228
Hawaii L.P.L.S. # 8094
Phone: 207 422 3906
Email: epare@adelphia.net

Hawaii Office:
P.O. Box 1086
Naalehu, HI 96772
808 939 7517

December 25, 2006

Robert W. Dudley, P.E. (via e-mail)
Hydrologist
USGS
196 Whitten Road
Augusta, ME 04330

Re: Map Mod project

Dear Mr. Dudley:

Our company has been processing Elevation Certificates and LOMA applications in eastern Hancock County since the early 90's. Our work has been concentrated in the towns of Winter Harbor, Gouldsboro, Hancock and Swans Island. I've lived on the southerly side of McNeil Point on Jellison Cove since 1978.

As you're probably aware, the towns of Swans Island, Sullivan and Sorrento are still on the original map system from the 70's which is quite pathetic. Look at the Swans Island maps for a couple of extreme examples. On panel 9, on the southerly side of Red Point, which has an open southeasterly exposure, the SFHA (Special Flood Hazard Area) is shown as extending 475 feet inland which puts it at an elevation of 90 feet! On panel 13, at the southwest corner of Long Cove with a very sheltered exposure, the SFHA is shown to extend inland by 325 feet which puts it at an elevation of about 65 feet! On top of that, the horizontal detail of the shoreline, roads, streams, etc. is very vague making it difficult to determine where on the map our clients' houses are located relative to the SFHA. It's very difficult to explain to my clients why they're paying me because the sloppy FEMA maps show the SFHAs as including my clients' houses resulting in them having to pay Flood Insurance unless they get my input. Hopefully efforts of Map Mod will give some relief to these 3 communities and others in the same program.

I'm aware of what appear to be 2 serious errors contained on 2 different FIRMs, one being on the Lamoine FIRM #2302850010A, the other being on the Hancock FIRM #2302840010A. On the Lamoine map, on the north side of Racoon Cove at Old Point there are VE zones that top out at 23 feet. On the Hancock map there are VE zones that top out at 24 feet, 19 feet above mean high water line with a fetch of only 5 miles!! If you examine any topo map, it's obvious that the body of water fronting Old Point and Hancock Point is an enclosed body of water with winds and wave action from the southeast being blocked by Schoodic Point in Winter Harbor, Jordan Island, Ironbound Island, the Porcupine islands and most significantly, Mount Desert Island. To give you an idea of what the magnitude of discrepancy is, if any of the local eastern Hancock County residents want to go see some wave action, they go to Schoodic Point in Winter Harbor (see FIRM #2303020010A) where there's a VE zone elevation of 20 feet, 4 feet lower than that at Hancock Point. Nobody would waste their time going to Hancock Point for wave action. We can only speculate that when the engineers ran the computer models to determine the elevation and location of the VE zones that they forgot to enter the existence of the barrier islands. I've discussed possible remedies to these flaws with Lou Sidell at the Augusta FEMA office and received this very disturbing response. My clients (residents of Hancock Point) could hire their own hydrologic engineering firm, at their own expense. If the firm concluded that the elevation should be lower, FEMA may, or may not accept the findings and FEMA may, or may not reimburse my clients for their considerable expenses for fixing FEMA's blunder!!

This brings us to FEMA's somewhat heavy handed technique of convincing communities to participate in the map modernization going on in the early 90's. I attended the meeting around 1990 with FEMA officials to request the town of Hancock's agreeing to participate in upgrading their Flood Maps. FEMA's big pitch was

that if the town didn't agree to participate, then no shore front owners could get bank loans for house construction and the town could be liable for resulting law suits (which appears to be questionable given that the town of Steuben, with miles of ocean front, is not participating in the FEMA program and yet construction is going on quite nicely??). Our response was "what the hell, we'll be getting professional quality, more accurate maps with established elevations based on hydrologic engineering studies". How could we not agree to participate? You can be sure that if we had been told the truth, that the town would be getting junk maps that contained V Zones where they shouldn't exist resulting in residents having to pay Flood Insurance, having the use of their property restricted and having to build on engineered piers, the town would very likely have considered ways to not participate in the program. Because of this situation, any time I'm asked by representatives of Swans Island, Sullivan or Sorrento about the desirability of upgrading their maps, I caution them to make sure they don't put themselves in the dilemma in which Hancock and Lamoine find themselves.

Getting on with more constructive criticism, from a surveyor's perspective it would be very helpful if the horizontal detail such as the shoreline, roads, streams, etc. on the FIRMs can be improved. This would help a surveyor to pinpoint the location of my client's house relative to the inland edge of the SFHA and also relative to where the elevation zones change as you follow the shore. It's quite typical on the current FIRMs that much of this detail is inexplicably vague or general, some of it even nonexistent. It's not unusual to find the difference in distance between the road and the shore on the FIRM to be off by 50 feet or more.

Any contracts with outside agencies should include provisions for dealing with blunders or incompetence in the modernization process. The public should not be penalized for any of these blunders as has happened in the past.

I urge FEMA to poll the surveyors in the communities who are preparing Elevation Certificates and processing LOMA applications. Who better to give FEMA input on how the process has been working?

Every time a new Elevation Certificate is released by FEMA, more information is being required translating to more time being spent by the surveyor which means more money. The latest version of Certificate requires the surveyor to determine a GPS derived Latitude and Longitude and to measure the square footage of the area contained within crawl space or enclosure. If the Lowest Adjacent Grade is above the SFHA, why are these new measurements needed, not to mention measurements for the Highest Adjacent Grade, the elevation of machinery servicing the building, the elevation of the first floor and the next higher floor, etc., etc.? To ease the burden of surveying costs to the public, a provision should be added to the Elevation Certificate waiving the need for any further measurements if the LAG is higher than the elevation of the SFHA, unless the applicant requests the additional measurements.

I want to make it clear that my views are not meant to represent those of any of the towns referenced herein. Hopefully this input will be useful. Feel free to contact me with questions or concerns.

Sincerely,

L. Edward Paré

Second letter from Ed Pare, December 27, 2006:

Hi Rob,

I neglected to address one of the flaws that is pervasive in the "modern" eastern Hancock County FIRMS with elevations. The inland edge of the SFHA is almost always shown to be much too far inland. I'm speculating that the reason for this was FEMA's reliance on the contours as shown on USGS quads. Interestingly, the horizontal detail on the quads is quite good, but the location of the first contour line coming in off the shore is almost always too far inland, sometimes by as much as 100 feet!

My understanding is that each community had ground control surveys done as part of the process for producing the modern FIRMs. In comparing the control surveys with the quad elevation, the inaccuracies of the quad contours must have been apparent. That being the case, why were the quad contours used to create the inland edge of the SFHAs? In case it's not obvious, the problem here is that almost every LOMA application we've processed involves a building that's shown to be within the SFHA only because the inland edge of the SFHA appears to have been based on the flawed quad contours. Why is the public having to pay surveyors to prove their buildings aren't located within a SFHA that is incorrect? Seems FEMA ought to paying us. Or maybe in known instances of flawed SFHAs, the requirement for Flood Insurance should be waived until the FIRMs are corrected??

This is another reason that the town of Hancock, and I'm sure other towns, might not have agreed to have their Flood Maps upgraded had they known that this kind of condition would have been imposed on the town.

Perhaps these conditions I'm observing aren't indicative of FIRMs in general. Another reason to poll the surveyors as part of the Map Mod effort.

I'm hopeful this situation can be rectified as part of the Map Mod process. I applaud your efforts and wish you luck. Please feel free to contact me if I can provide you with any data that might be useful.

Ed

Appendix E: Census Block-Group Data

[CID, community identification number]

Census block group	CID	Community name	Area, in square miles	Population density	Population density score	Population growth	Population growth score
230099651001	230598	T07 SD	481.23	0.15	1.84	0.00	0.00
230099651002	230595	Osborn	234.58	3.59	3.98	0.00	0.00
230099651003	230286	Mariaville	96.23	8.92	4.60	53.33	8.81
230099652001	230289	Otis	28.78	18.87	5.11	52.96	8.80
230099652002	230279	Dedham	25.84	12.61	4.83	15.70	6.51
230099652003	230279	Dedham	18.41	59.53	5.88	15.70	6.51
230099653001	230065	Bucksport	25.86	32.44	5.47	1.72	2.33
230099653002	230065	Bucksport	13.06	66.36	5.96	1.72	2.33
230099653003	230065	Bucksport	7.03	129.67	6.41	1.72	2.33
230099653004	230065	Bucksport	6.40	167.37	6.58	1.72	2.33
230099653005	230065	Bucksport	4.10	297.48	6.97	1.72	2.33
230099654001	230288	Orland	28.60	25.03	5.30	18.23	6.79
230099654002	230288	Orland	23.86	59.42	5.88	18.23	6.79
230099654003	230300	Verona	7.48	71.24	6.00	3.50	3.67
230099655001	230066	Ellsworth	19.63	44.11	5.68	8.05	5.24
230099655002	230066	Ellsworth	37.71	25.78	5.32	8.05	5.24
230099655003	230066	Ellsworth	24.59	65.63	5.95	8.05	5.24
230099655004	230066	Ellsworth	1.10	843.01	7.68	8.05	5.24
230099655005	230066	Ellsworth	2.43	231.05	6.80	8.05	5.24
230099655006	230066	Ellsworth	7.71	196.50	6.69	8.05	5.24
230099656001	230284	Hancock	22.05	57.37	5.86	22.20	7.16
230099656002	230284	Hancock	7.79	113.27	6.32	22.20	7.16
230099656003	230285	Lamoine	18.33	81.58	6.10	14.04	6.29
230099656004	230299	Trenton	18.35	74.65	6.04	29.25	7.68
230099657001	230282	Franklin	37.83	36.21	5.55	20.07	6.97
230099657003	230295	Sullivan	28.04	42.27	5.65	5.99	4.69
230099657004	230292	Sorrento	3.62	80.16	6.08	0.00	0.00
230099658001	230283	Gouldsboro	12.91	50.44	5.77	0.00	0.00
230099658002	230283	Gouldsboro	33.29	38.75	5.59	0.00	0.00
230099658003	230302	Winter Harbor	13.40	73.71	6.03	0.00	0.00
230099659001	230064	Bar Harbor	0.23	3105.88	8.56	8.49	5.34
230099659002	230064	Bar Harbor	5.52	221.11	6.77	8.49	5.34
230099659003	230064	Bar Harbor	6.60	111.84	6.31	8.49	5.34
230099659004	230064	Bar Harbor	15.70	55.48	5.84	8.49	5.34
230099659005	230064	Bar Harbor	15.20	83.13	6.11	8.49	5.34
230099660001	230287	Mount Desert	18.77	37.67	5.57	11.06	5.84
230099660003	230287	Mount Desert	0.72	663.18	7.51	11.06	5.84
230099660004	230287	Mount Desert	20.56	45.03	5.69	11.06	5.84
230099661001	230278	Cranberry Isles	2.88	44.49	5.69	0.00	0.00
230099661002	230293	Southwest Harbor	0.45	1006.36	7.80	0.72	0.68
230099661003	230293	Southwest Harbor	5.12	111.99	6.31	0.72	0.68
230099661004	230293	Southwest Harbor	8.28	113.12	6.32	0.72	0.68
230099662001	230298	Tremont	12.83	62.88	5.92	15.48	6.48
230099662002	230298	Tremont	3.16	228.13	6.79	15.48	6.48
230099662003	230297	Swans Island	13.43	27.18	5.35	0.00	0.00
230099663001	230296	Surry	17.49	46.59	5.72	35.56	8.05
230099663002	230296	Surry	22.33	24.45	5.28	35.56	8.05
230099663003	230274	Blue Hill	31.94	38.48	5.59	23.13	7.24
230099663004	230274	Blue Hill	26.75	43.40	5.67	23.13	7.24
230099664001	230290	Penobscot	44.62	30.12	5.42	18.83	6.85
230099664002	230277	Castine	9.05	148.32	6.50	15.68	6.50
230099665001	230275	Brooklin	19.48	43.18	5.67	7.13	5.02
230099665002	230291	Sedgwick	28.59	38.55	5.59	21.77	7.12
230099665003	230276	Brooksville	16.95	25.37	5.31	19.87	6.95
230099665004	230276	Brooksville	21.47	22.40	5.22	19.87	6.95
230099666001	230294	Stonington	8.19	140.69	6.46	0.00	0.00
230099666003	230280	Deer Isle	12.33	59.21	5.88	2.57	3.09
230099666004	230280	Deer Isle	8.34	84.29	6.12	2.57	3.09
230099666005	230280	Deer Isle	5.71	77.64	6.06	2.57	3.09
Minimum			0.23	0.15	1.84	0.00	0.00
Maximum			481.23	3105.88	8.56	53.33	8.81
Mean			28.69	165.21	5.91	11.61	4.57
Median			15.70	59.42	5.88	8.49	5.34

Census block group	CID	Community name	Area, in square miles	Housing units density	Housing units density score	Claims density	Claims density score
230099651001	230598	T07 SD	481.23	1.21	2.09	0.00	0.00
230099651002	230595	Osborn	234.58	3.81	3.05	0.00	0.00
230099651003	230286	Mariaville	96.23	6.19	3.46	0.00	0.00
230099652001	230289	Otis	28.78	23.56	4.58	0.00	0.00
230099652002	230279	Dedham	25.84	10.37	3.89	0.00	0.00
230099652003	230279	Dedham	18.41	42.74	5.08	0.00	0.00
230099653001	230065	Bucksport	25.86	15.35	4.22	0.00	0.00
230099653002	230065	Bucksport	13.06	31.54	4.82	0.00	0.00
230099653003	230065	Bucksport	7.03	59.15	5.35	0.00	0.00
230099653004	230065	Bucksport	6.40	76.57	5.57	0.00	0.00
230099653005	230065	Bucksport	4.10	138.37	6.06	0.24	3.31
230099654001	230288	Orland	28.60	17.73	4.34	0.00	0.00
230099654002	230288	Orland	23.86	31.26	4.82	0.00	0.00
230099654003	230300	Verona	7.48	35.02	4.91	0.00	0.00
230099655001	230066	Ellsworth	19.63	26.38	4.67	0.00	0.00
230099655002	230066	Ellsworth	37.71	16.60	4.29	0.00	0.00
230099655003	230066	Ellsworth	24.59	30.70	4.80	0.00	0.00
230099655004	230066	Ellsworth	1.10	396.55	6.95	0.00	0.00
230099655005	230066	Ellsworth	2.43	109.14	5.86	0.00	0.00
230099655006	230066	Ellsworth	7.71	109.15	5.86	0.00	0.00
230099656001	230284	Hancock	22.05	27.39	4.71	0.00	0.00
230099656002	230284	Hancock	7.79	76.54	5.57	0.00	0.00
230099656003	230285	Lamoine	18.33	43.82	5.10	0.00	0.00
230099656004	230299	Trenton	18.35	44.46	5.11	0.00	0.00
230099657001	230282	Franklin	37.83	23.84	4.59	0.00	0.00
230099657003	230295	Sullivan	28.04	25.29	4.64	0.00	0.00
230099657004	230292	Sorrento	3.62	77.95	5.58	0.00	0.00
230099658001	230283	Gouldsboro	12.91	39.36	5.01	0.00	0.00
230099658002	230283	Gouldsboro	33.29	24.63	4.62	0.00	0.00
230099658003	230302	Winter Harbor	13.40	41.63	5.06	0.00	0.00
230099659001	230064	Bar Harbor	0.23	2014.97	8.31	0.00	0.00
230099659002	230064	Bar Harbor	5.52	137.08	6.06	0.00	0.00
230099659003	230064	Bar Harbor	6.60	56.37	5.31	0.00	0.00
230099659004	230064	Bar Harbor	15.70	30.07	4.78	0.00	0.00
230099659005	230064	Bar Harbor	15.20	48.21	5.18	0.00	0.00
230099660001	230287	Mount Desert	18.77	33.78	4.88	0.00	0.00
230099660003	230287	Mount Desert	0.72	692.44	7.41	0.00	0.00
230099660004	230287	Mount Desert	20.56	37.39	4.97	0.00	0.00
230099661001	230278	Cranberry Isles	2.88	119.56	5.94	0.00	0.00
230099661002	230293	Southwest Harbor	0.45	741.53	7.47	0.00	0.00
230099661003	230293	Southwest Harbor	5.12	78.18	5.58	0.00	0.00
230099661004	230293	Southwest Harbor	8.28	66.64	5.45	0.00	0.00
230099662001	230298	Tremont	12.83	41.68	5.06	0.00	0.00
230099662002	230298	Tremont	3.16	170.63	6.24	0.00	0.00
230099662003	230297	Swans Island	13.43	35.74	4.93	0.00	0.00
230099663001	230296	Surry	17.49	31.44	4.82	0.00	0.00
230099663002	230296	Surry	22.33	16.26	4.27	0.00	0.00
230099663003	230274	Blue Hill	31.94	20.85	4.48	0.00	0.00
230099663004	230274	Blue Hill	26.75	30.65	4.80	0.00	0.00
230099664001	230290	Penobscot	44.62	16.20	4.27	0.00	0.00
230099664002	230277	Castine	9.05	71.67	5.51	0.00	0.00
230099665001	230275	Brooklin	19.48	35.78	4.93	0.00	0.00
230099665002	230291	Sedgwick	28.59	23.47	4.58	0.00	0.00
230099665003	230276	Brooksville	16.95	18.05	4.36	0.00	0.00
230099665004	230276	Brooksville	21.47	22.59	4.54	0.00	0.00
230099666001	230294	Stonington	8.19	111.02	5.88	0.00	0.00
230099666003	230280	Deer Isle	12.33	43.96	5.10	0.00	0.00
230099666004	230280	Deer Isle	8.34	60.91	5.38	0.00	0.00
230099666005	230280	Deer Isle	5.71	92.02	5.72	0.00	0.00
Minimum			0.23	1.21	2.09	0.00	0.00
Maximum			481.23	2014.97	8.31	0.24	3.31
Mean			28.69	110.26	5.10	0.00	0.06
Median			15.70	37.39	4.97	0.00	0.00

Census block group	CID	Community name	Area, in square miles	Repetitive loss density	Repetitive loss density score	Repetitive loss property density	Repetitive loss property density score
230099651001	230598	T07 SD	481.23	0.00	0.00	0.00	0.00
230099651002	230595	Osborn	234.58	0.00	0.00	0.00	0.00
230099651003	230286	Mariaville	96.23	0.00	0.00	0.00	0.00
230099652001	230289	Otis	28.78	0.00	0.00	0.00	0.00
230099652002	230279	Dedham	25.84	0.00	0.00	0.00	0.00
230099652003	230279	Dedham	18.41	0.00	0.00	0.00	0.00
230099653001	230065	Bucksport	25.86	0.00	0.00	0.00	0.00
230099653002	230065	Bucksport	13.06	0.00	0.00	0.00	0.00
230099653003	230065	Bucksport	7.03	0.00	0.00	0.00	0.00
230099653004	230065	Bucksport	6.40	0.00	0.00	0.00	0.00
230099653005	230065	Bucksport	4.10	0.00	0.00	0.00	0.00
230099654001	230288	Orland	28.60	0.00	0.00	0.00	0.00
230099654002	230288	Orland	23.86	0.00	0.00	0.00	0.00
230099654003	230300	Verona	7.48	0.00	0.00	0.00	0.00
230099655001	230066	Ellsworth	19.63	0.00	0.00	0.00	0.00
230099655002	230066	Ellsworth	37.71	0.00	0.00	0.00	0.00
230099655003	230066	Ellsworth	24.59	0.00	0.00	0.00	0.00
230099655004	230066	Ellsworth	1.10	0.00	0.00	0.00	0.00
230099655005	230066	Ellsworth	2.43	0.00	0.00	0.00	0.00
230099655006	230066	Ellsworth	7.71	0.00	0.00	0.00	0.00
230099656001	230284	Hancock	22.05	0.00	0.00	0.00	0.00
230099656002	230284	Hancock	7.79	0.00	0.00	0.00	0.00
230099656003	230285	Lamoine	18.33	0.00	0.00	0.00	0.00
230099656004	230299	Trenton	18.35	0.00	0.00	0.00	0.00
230099657001	230282	Franklin	37.83	0.00	0.00	0.00	0.00
230099657003	230295	Sullivan	28.04	0.00	0.00	0.00	0.00
230099657004	230292	Sorrento	3.62	0.00	0.00	0.00	0.00
230099658001	230283	Gouldsboro	12.91	0.00	0.00	0.00	0.00
230099658002	230283	Gouldsboro	33.29	0.00	0.00	0.00	0.00
230099658003	230302	Winter Harbor	13.40	0.00	0.00	0.00	0.00
230099659001	230064	Bar Harbor	0.23	0.00	0.00	0.00	0.00
230099659002	230064	Bar Harbor	5.52	0.00	0.00	0.00	0.00
230099659003	230064	Bar Harbor	6.60	0.00	0.00	0.00	0.00
230099659004	230064	Bar Harbor	15.70	0.00	0.00	0.00	0.00
230099659005	230064	Bar Harbor	15.20	0.00	0.00	0.00	0.00
230099660001	230287	Mount Desert	18.77	0.00	0.00	0.00	0.00
230099660003	230287	Mount Desert	0.72	0.00	0.00	0.00	0.00
230099660004	230287	Mount Desert	20.56	0.00	0.00	0.00	0.00
230099661001	230278	Cranberry Isles	2.88	0.00	0.00	0.00	0.00
230099661002	230293	Southwest Harbor	0.45	0.00	0.00	0.00	0.00
230099661003	230293	Southwest Harbor	5.12	0.00	0.00	0.00	0.00
230099661004	230293	Southwest Harbor	8.28	0.00	0.00	0.00	0.00
230099662001	230298	Tremont	12.83	0.00	0.00	0.00	0.00
230099662002	230298	Tremont	3.16	0.00	0.00	0.00	0.00
230099662003	230297	Swans Island	13.43	0.00	0.00	0.00	0.00
230099663001	230296	Surry	17.49	0.00	0.00	0.00	0.00
230099663002	230296	Surry	22.33	0.00	0.00	0.00	0.00
230099663003	230274	Blue Hill	31.94	0.00	0.00	0.00	0.00
230099663004	230274	Blue Hill	26.75	0.00	0.00	0.00	0.00
230099664001	230290	Penobscot	44.62	0.00	0.00	0.00	0.00
230099664002	230277	Castine	9.05	0.00	0.00	0.00	0.00
230099665001	230275	Brooklin	19.48	0.00	0.00	0.00	0.00
230099665002	230291	Sedgwick	28.59	0.00	0.00	0.00	0.00
230099665003	230276	Brooksville	16.95	0.00	0.00	0.00	0.00
230099665004	230276	Brooksville	21.47	0.00	0.00	0.00	0.00
230099666001	230294	Stonington	8.19	0.00	0.00	0.00	0.00
230099666003	230280	Deer Isle	12.33	0.00	0.00	0.00	0.00
230099666004	230280	Deer Isle	8.34	0.00	0.00	0.00	0.00
230099666005	230280	Deer Isle	5.71	0.00	0.00	0.00	0.00
Minimum			0.23	0.00	0.00	0.00	0.00
Maximum			481.23	0.00	0.00	0.00	0.00
Mean			28.69	0.00	0.00	0.00	0.00
Median			15.70	0.00	0.00	0.00	0.00

Census block group	CID	Community name	Policies density	Policies density score	Disasters	Disasters score	Final census block group score
230099651001	230598	T07 SD	0.00	0.00	5	2.94	6.9
230099651002	230595	Osborn	0.00	1.13	5	2.94	11.1
230099651003	230286	Mariaville	0.00	0.00	5	2.94	19.8
230099652001	230289	Otis	0.00	0.00	5	2.94	21.4
230099652002	230279	Dedham	0.00	0.00	5	2.94	18.2
230099652003	230279	Dedham	0.00	0.00	5	2.94	20.4
230099653001	230065	Bucksport	0.00	0.00	5	2.94	15.0
230099653002	230065	Bucksport	0.00	0.00	5	2.94	16.1
230099653003	230065	Bucksport	0.14	3.85	5	2.94	20.9
230099653004	230065	Bucksport	0.63	5.00	5	2.94	22.4
230099653005	230065	Bucksport	0.00	0.00	5	2.94	21.6
230099654001	230288	Orland	0.07	3.30	5	2.94	22.7
230099654002	230288	Orland	0.04	2.90	5	2.94	23.3
230099654003	230300	Verona	0.00	0.00	5	2.94	17.5
230099655001	230066	Ellsworth	0.05	3.06	5	2.94	21.6
230099655002	230066	Ellsworth	0.13	3.80	5	2.94	21.6
230099655003	230066	Ellsworth	1.14	5.47	5	2.94	24.4
230099655004	230066	Ellsworth	6.35	6.81	5	2.94	29.6
230099655005	230066	Ellsworth	1.65	5.76	5	2.94	26.6
230099655006	230066	Ellsworth	0.26	4.32	5	2.94	25.1
230099656001	230284	Hancock	0.00	0.00	5	2.94	20.7
230099656002	230284	Hancock	0.77	5.17	5	2.94	27.2
230099656003	230285	Lamoine	0.33	4.50	5	2.94	24.9
230099656004	230299	Trenton	0.22	4.19	5	2.94	26.0
230099657001	230282	Franklin	0.00	0.00	5	2.94	20.0
230099657003	230295	Sullivan	0.14	3.86	5	2.94	21.8
230099657004	230292	Sorrento	0.83	5.22	5	2.94	19.8
230099658001	230283	Gouldsboro	0.93	5.31	5	2.94	19.0
230099658002	230283	Gouldsboro	0.36	4.58	5	2.94	17.7
230099658003	230302	Winter Harbor	0.60	4.97	5	2.94	19.0
230099659001	230064	Bar Harbor	0.00	0.00	5	2.94	25.2
230099659002	230064	Bar Harbor	0.91	5.29	5	2.94	26.4
230099659003	230064	Bar Harbor	1.36	5.61	5	2.94	25.5
230099659004	230064	Bar Harbor	0.19	4.08	5	2.94	23.0
230099659005	230064	Bar Harbor	0.00	0.00	5	2.94	19.6
230099660001	230287	Mount Desert	0.48	4.80	5	2.94	24.0
230099660003	230287	Mount Desert	4.18	6.48	5	2.94	30.2
230099660004	230287	Mount Desert	0.19	4.10	5	2.94	23.5
230099661001	230278	Cranberry Isles	5.21	6.65	5	2.94	21.2
230099661002	230293	Southwest Harbor	15.45	7.50	5	2.94	26.4
230099661003	230293	Southwest Harbor	0.98	5.35	5	2.94	20.9
230099661004	230293	Southwest Harbor	0.36	4.58	5	2.94	20.0
230099662001	230298	Tremont	0.08	3.39	5	2.94	23.8
230099662002	230298	Tremont	4.74	6.58	5	2.94	29.0
230099662003	230297	Swans Island	0.82	5.21	5	2.94	18.4
230099663001	230296	Surry	0.00	0.00	5	2.94	21.5
230099663002	230296	Surry	0.72	5.11	5	2.94	25.6
230099663003	230274	Blue Hill	0.22	4.19	5	2.94	24.4
230099663004	230274	Blue Hill	0.07	3.35	5	2.94	24.0
230099664001	230290	Penobscot	0.02	2.42	5	2.94	21.9
230099664002	230277	Castine	0.88	5.27	5	2.94	26.7
230099665001	230275	Brooklin	0.15	3.92	5	2.94	22.5
230099665002	230291	Sedgwick	0.14	3.84	5	2.94	24.1
230099665003	230276	Brooksville	0.06	3.17	5	2.94	22.7
230099665004	230276	Brooksville	0.09	3.52	5	2.94	23.2
230099666001	230294	Stonington	0.98	5.35	5	2.94	20.6
230099666003	230280	Deer Isle	1.05	5.41	5	2.94	22.4
230099666004	230280	Deer Isle	1.44	5.65	5	2.94	23.2
230099666005	230280	Deer Isle	0.88	5.27	5	2.94	23.1
Minimum			0.00	0.00	5.00	2.94	6.87
Maximum			15.45	7.50	5.00	2.94	30.19
Mean			0.95	3.55	5.00	2.94	22.12
Median			0.19	4.10	5.00	2.94	22.43